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SECOND QUARTO SERIES.—VOL. XXXIX., No. 7.] NEW YORK, FEBRUARY 17, 1883. [WHOLE No. 2,442.—VOL. LVI.

THE editor of the RAILROAD JOURNAL is pled to ceive information of railroad enterprises already entered upon or projected, items regarding the business done on the roads, such as relate to persons employed in the rails road and kindred interests; in short, about all matter which the readers of such a paper as this are gratified to find within its columns.

ORGANIZATION.

THE annual meeting of the stockholders of the Massillon and Cleveland Railroad Company was held at Massillon, Ohio, on the 6th inst., at which the following board of directors was elected: Lewis H. Myer, Charles W. Cass, J. N. McCullough, Simon Perkins, John Sherman, Amasa Stone and P. G. Albright.

THE directors of the Delaware Division Canal Company, elected at the annual meeting of the stockholders held in Philadelphia on the 6th inst., are: J. W. Woolston, I. V. Williamson, J. S. Harris, E. W. Clark, F. C. Yarnall, S. F. Corlies, F. R. Cope, E. Roberts, Jr., and T. McKean. The officers are: President, J. W. Woolston; secretary and treasurer, Henry Giles.

AT the annual meeting of the stockholders of the Philadelphia and Erie Railroad Company, held in Philadelphia on the 12th inst., the following board of managers was elected: J. N. DuBarry, Wistar Morris, Strickland Kneass, Samuel Gustine Thompson, John P. Wetherill, N. Parker Shortridge, Henry M. Phillips, Henry D. Welsh, William J. Howard and William L. Elkins.

AT a meeting of the stockholders of the Scioto Valley Railroad Company, held at Columbus, Ohio, on the 8th inst., the following directors were chosen: William Adams, Edward T. Winslow, Horace Porter and Frank H. Davis, of New York: William W. Franklin, George Skinner and Joseph Robinson, of Columbus; Marcus Boggs, of Chillicothe, and George Davis, of Portsmouth.

THE York Harbor and Beach Railroad Company, which will build a narrow gauge from Kitt[illegible] to York Beach, Me., has been organized at Portland by the election of the following named directors: Edward S. Marshall of York, Frederic E. Potter of Portsmouth, N. H., John C. Stevens, Henry E. Evans, Jeremiah P. Sampson, Samuel W. Junkins and John E. Staples of York.

THE election for directors of the Huntingdon and Broad Top Mountain Railroad and Coal Company, held in Philadelphia on the 6th inst., resulted in the choice of the following board: B. Andrews Knight, Rathwell Wilson, John Devereux, I. V. Williamson, James Long, James Whitaker, Joseph H. Trotter, William P. Jenks, C. V. Wharton, Thomas R. Patton, Jacob Nayler, Spencer M. Janney and William J. Barr. President, B. Andrews Knight.

AT the annual meeting of the stockholders of the Boston, Barre and Gardner Railroad Company, held in Worcester, Mass., on the 7th inst., the following directors were elected: Calvin Foster, W. W. Rice, Samuel E. Hildreth, S. Salisbury, Jr., Samuel R. Heywood, A. G. Bullock, H. M. Witter, William H. Morse, E. W. Vaill of Worcester, N. D. White of Winchendon, and Franklin Eaton of Gardner. The directors organized with H. M. Witter, president, and William E. Starr, clerk and treasurer.

AT the annual meeting of the stockholders of the Burton Stock Car Company, recently held in Boston, Mass., the following directors were elected: Percival L. Everett, James Sturgis, Joel M. Holden, E. F. Perkins, Louis C. Southard, Henry A. Holden, and George D. Burton. The officers are: President, Joel M. Holden; secretary and treasurer, George D. Burton; assistant secretary, Clarence Hale; general manager, Edwin F. Perkins; counsel, Louis C. Southard. The office of the company is at 194 Washington street, Boston, Mass.

AT the annual meeting of the Ottawa and Gatineau Valley Railway Company, held in Ottawa on the 7th inst., the following gentlemen were elected directors for the ensuing year: J. M. Currier, C. H. Mackintosh, M. P., J. Murray Mitchell, Luke Henry, of Aylwin; and Dr. Duhamel, of Hull. Subsequently a meeting of the newly elected directors was held, when the following officers were re-elected: J. M. Currier president, C. H. Mackintosh, vice-president, J. Murray Mitchell, managing director and engineer-in-chief; H. B. Mackintosh, secretary.

ELECTIONS were held at Pittsburgh, Penn., on the 8th inst., for directors of the following three street car companies, the routes of which are all inside of the city limits, viz:—Belt Railroad Company—President, Robert Liddel; directors, J. J. Speck, Richard N. Wray, J. L. Abell, J. H. McCreery, W. C. Erskine, Morton Hunter, Norman May. Twelfth Street and Arlington Avenue Railroad Company—President, J. J. Speck; directors, Robert Liddell, Richard N. Wray, John L. Abell, J. H. McCreery, W. C. Erskine, Morton Hunter, Norman May. Pittsburgh and South End Railroad Company—President, J. J. Speck; directors, Robert Liddell, Richard N. Wray, John L. Abell, J. H. McCreery, W. C. Erskine, Morton Hunter, Norman May. J. H. McCreery, Esq., was elected secretary and treasurer of the three companies.

A MEETING of the bond and stock holders of the Marietta and Cincinnati Railroad Company was held in Chillicothe, Ohio, on the 7th inst., pursuant to the order of the Ross County Common Pleas Court, at which the name of the company was changed to "Cincinnati, Washington and Baltimore Railroad Company," and the following board of directors elected: Robert Garrett, T. Edward Hambleton, Samuel Spencer, J. Carroll Walsh, of Baltimore; W. T. McClintock, of Chillicothe; Orland Smith, of Columbus, Ohio; and George Hoadley, James D. Lehmer, and J. L. Keck, of Cincinnati. The directors of the Cincinnati, Washington and Baltimore Railroad Company met in Cincinnati on the 8th inst., and elected Orland Smith president, Charles F. Low secretary and and auditor, and W. E. Jones treasurer. J. H. Stewart has been made general superintendent, T. P. Berry, general passenger agent, and R. M. Frazer, general freight agent.

INCORPORATION.

ARTICLES of incorporation were filed at Columbus, Ohio, on the 7th inst., of the Miami Valley Railroad Company, from Munster, Auglaize county, to Troy; capital $450,000.

ARTICLES of incorporations were filed at Albany, N. Y., on the 10th inst., of the Waterford and Cohoes Railroad Company, capital $25,000, to run from Waterford to Cohoes.

THE Youghiogheny and Elizabeth Railroad Company has made application at Harrisburg, Penn., for a charter. The road is to run from the Youghiogeny River at Buena Vista to the Monongahela River at Elizabeth—a distance of ten miles. C. B. Johnston, of Meadville, is president, and the capital stock is $50,000.

ARTICLES of incorporation of the Osceola and Malden Short-Line Railroad, with a capital of $300,000, have been filed in the office of the

Secretary of State of Arkansas. The road is to be built from Osceola, Ark., a distance of sixty miles, to Malden, Mo. The directors are John Drive, W. B. Edrington and W. J. Bowen, of Osceola, and Caldwell Bradshaw, of Little Rock.

THE Vincennes and Ohio River Railroad Company was organized in Indiana on the 10th inst. with $1,000,000 fixed as the capital stock. Thirteen directors were elected: Albert Netter, Gabriel Netter, Nathan Newburg, Charles Rice, George B. Kerper and Leo B. Newburg, of Cincinnati; P. R. McCarthy, Eugene Hack, H. A. Foulks, G. F. Montgomery and J. S. McCoy, of Vincennes; R. M. Welman, of Jasper, and O. B. Stein, of Otwill.

ARTICLES of incorporation have been filed at Indianapolis, Ind., of "The Manufacturer's Belt Railroad" of Terre Haute, with a capital stock of $100,000. The length of the road was stated to be two miles in length. The following gentlemen were named as the incorporators: Josephus Collett, Crawford Fairbanks, R. G. Hervey, R. Jencks, T. B. Johns, Sant. C. Davis and A. O. Johns.

CONSTRUCTION.

SIX miles of the Phœnixville and West Chester Railroad north from Frazer are now ready for the track.

THE Curtis's Bay branch of the Baltimore and Ohio, four miles long, will be ready for opening about March 1.

THE profiles of the survey of the Lake Borgne Railroad are completed, and in a short time active work will commence.

WORK was commenced on the Phœnixville tunnel of the Philadelphia, Phœnixville and Reading Railroad on the 7th inst.

THE Pennsylvania Railroad Company has determined to put down altogether five tracks between Harrisburg and Middletown.

THE Pensacola and Atlantic Railroad, connecting Pensacola, Florida, with the Apalachicola River, was completed on the 10th inst.

CHIEF Engineer Munroe, with his assistants, will soon commence the survey of a railroad line from San Antonio, Texas, to Fredericksburg. It is stated that this road will positively be built.

THE line of road between South Bend, Ind., and the New York, Chicago and St. Louis Railway, by which the Vandalia Northern Extension will make a connection with that line, is now being located.

THE line of survey for the new road of the Pennsylvania Railroad Company up the Schuylkill Valley has been completed, and should it be finally adopted, the work of grading will be commenced in a few days.

IT is said that the line of railway to Bonne St. Anne, that great resort for multitudes of Catholics, has been begun, and that the promoters, including the Mayor of Quebec and several capitalists, are about to negotiate their bonds in Paris.

THE Northern Pacific Railroad Company has decided to build at once thirty-nine and a half miles of road between Portland and Kalama, to connect its western terminus with the railroad system of the Oregon Railway and Navigation Company.

IT is expected that the San Joaquin and Sierra Nevada Railroad will be completed to Altaville by the 1st of July, and will secure the travel to the Yosemite, as it will afford the shortest and most accessible connection with that famous valley.

THE new extension of the Philadelphia and Reading Railroad Company, running from Williamsport to Linden, a distance of five miles, is completed. This is the portion of the new road that was built to connect with the Jersey Shore, Pine Creek and Buffalo Railroad.

IT is said that the necessary means for the completion of the Mexican National Railway from Laredo to the City of Mexico have been secured, and the work is to be put under contract. It is also said that work will be resumed on the International Extension to the City of Mexico.

AT the annual meeting of the shareholders of the Ottawa and Gatineau Valley Railway Co., held at the offices, Victoria Chambers, Wellington street, Ottawa, on the 7th inst., important business connected with the enterprise was transacted, with a view to active operations being undertaken in the early spring.

GOOD progress is being made with the railway branch from Sackville Station, N. B., on the Intercolonial Railway to Cape Tormentine, thirty-nine miles, and it is expected to be finished by next fall. Cape Tormentine is the nearest point on the mainland to Prince Edward Island, and faces Cape Traverse, on the latter.

THE Bell's Gap Railroad, operated by the Pennsylvania Railroad Company, is to be made a broad-gauge road as soon as the spring opens. Fifty-pound rails are to be put down, and the line extended four miles to Witmer, where there are valuable coal openings, and later on to Punxatawney, in Jefferson county, when it will have a capacity of 100 cars per day.

ON the 1st of March the Union Pacific Railway Company will open its Oregon Short Line to Shoshone, Idaho, which is a junction with the Wood River Branch, the distance being 321 miles from the junction of the short line with the main line, at Granger, Wyoming Territory. The stage lines into the Southern Idaho mining regions, which now run from Kelton, Utah, and Blackfoot, Idaho, will then run from Shoshone.

AN engineer of the line surveyed for the Baltimore and Ohio Railroad to Philadelphia says that the route through Delaware county will pass a little south of Media, near Swarthmore, thence bearing north, pass below Coopertown, and cross the Pennsylvania Railroad just west of Ardmore, and thence via Mill Creek to its connection with the Philadelphia and Reading Railroad, and so on to New York by the Bound Brook route, and to Philadelphia by the Reading Road.

THE number of cattle in the United States is estimated at 33,753,365, valued at $659,000,000. This does not include the bulls of the stock exchange.

Electrical Railways in Ireland.

A CORRESPONDENT of the Pall Mall *Gazette*, referring to the recently published article on the "Electrical Railways in Ireland," which we last week transferred to our own columns, in which allusion is made to the "Giant's Causeway and Portrush Electric Tramway," goes on to say:

As the engineer and constructor of this tramway, you will allow me to amend a few particulars, as the concluding sentence is rather skeptical as to our prospects of financial success, even granting that the working of our tramway by electricity be successfully carried out. In all such companies the prospects of dividends largely depend upon the first capital cost or total cost per mile, but instead of, as is stated in the article referred to, raising £45,000 to construct six miles of tramway, or at the rate of £7,500 per mile, we are now able to assert—and can do so with full assurance, as our tramway is now complete—that our total prime cost will be less than one-half this sum, or about £21,000 for six and a half miles of tramway, and inclusive also of the cost of buildings, rolling-stock, electric plant, engines, law, Parliamentary, and engineering expenses. The "sanguine estimate of the promoters"—to the fact of our having no promoters our success is due—is stronger now than ever, and the experimental working hitherto of our electric motive power amply justifies a continuance of our "sanguine estimate." With regard to the working I need only mention that our electric car is able to ascend a long continuous hill of about one and one-half miles in length, and with a gradient of one in thirty-five, drawing a second car behind it, and work as readily and as well at a distance of two miles from the generator as adjacent to it. Although in a "remote corner of Ireland" we are not here disturbed by the troubles which distract our unfortunate country elsewhere, nor are we devoid of enterprise in offering the additional attraction to visitors to the Giant's Causeway of being carried there on an electric tramway.

Railroad Train Weather Signals.

NEGOTIATIONS are pending between the Ohio State Meteorological Bureau and the Cleveland, Akron and Columbus Railroad Company with a view to the adoption of a code of signals to be displayed on their passenger trains, between Columbus and Cleveland, forecasting the weather for the next day, for the benefit of the agricultural and general community. The Ohio State *Journal*, from which the above was obtained, says that "the plain most likely to be adopted will be to display a large signal on each side of the baggage car, having it understood that certain colors and shapes of signal will represent certain conditions of the weather, as storms, rains, clearing or colder weather, etc. In this way, when the community along the line of the route get acquainted with the signals, and what they denote, they can tell the probable state of the weather for the next twenty-four or thirty-six hours." This will supply information to the farming community that will be very valuable, and may in time become a distinctive feature of the railroad service.

CORRESPONDENCE.

[We pay no attention to communications unless the name and address of the writer are given, though the same will not be published if so requested. We assume no responsibility for statements made by correspondents, and we do not necessarily endorse ideas advanced by them. Under these conditions we think it of value to our readers to devote a liberal space to the free discussion by others—whose opinions may be at variance with our own—of subjects pertinent to our department of journalism.]

The Medical and Surgical Inspection Humbug.

To the Editor of the Am. R. R. Journal.

Dear Sir:—There have been admitted to the columns of your paper several communications from Dr. S. S. Herrick, whose official position is apparently Secretary of the Board of Health of the State of Louisiana. For the purpose of hearing what could be said on that side of the subject, doubtless, Dr. Herrick has been allowed full sweep to deal with it as he felt inclined. It is to be hoped, however, that his views are not endorsed in full by the American Railroad Journal. If I understand him aright, he proposes that every railroad company shall organize a medical staff, and that it shall institute a system of medical inspection of its employés to see whether they are suffering from malformations, constitutional taint, venereal affection, or other disqualifying ailment; this to be a permanent department of the railroad service.

He also advocates the use of railroad hospitals for cases of injury; that a supply of surgical appliances and instruments should be kept at stations, and carried on passenger trains; also that the carriages, buildings and grounds be made subjects of medical inspection; also that the transportation of live-stock should be brought under this medical supervision—all these as permanent features of administration. During times of epidemic disease like yellow fever, the Doctor would carry the inspection further, so as to make a sort of Quarantine Bureau in the railroad—besides that instituted by the Government.

Undoubtedly the Doctor has brought forward all the best arguments he could think of in behalf of his pet scheme; but he has not discussed the objections to it. The first and greatest objection strikes one at the first glance, that this is a species of petty inquisition into an affair of business, which, if not wholly needless, is liable to become an insufferable nuisance. The nearest analogy to it are the health requirements of National schools. It is true that the State undertakes to set up a standard of health among the attendants of public schools; but this is partly because of their public character, and partly because the public revenues are taken to maintain them. It might also be added, partly because the attendants are children of the poorer classes.

If the medical profession were agreed upon what are the true principles of physiological and therapeutic science, there would be more force in the Doctor's recommendations. It would be a disqualification in him as a guide on those subjects, if he did not know that the various schools of medicine are at variance, and that even among the teachers of the same school there is wide disagreement when we come to the dark corners and fundamental questions of pathology. In other words, medicine is still a growing science, barely emerging from its infancy; although the statute laws in most of the States favor the existence of medical societies—a species of trades-union—the most severe critics of the current medical practice are to be found among the students and teachers of medicine themselves.

Another great objection to Dr. Herrick's ambition would seem to lie in the fact that the world has gotten along in its transportation for some hundreds and thousands of years, without doctors being directly concerned. In the first place, the people who conduct railroads and who travel upon railroads are a self-selected class; the average of physical and mental health among them is undoubtedly high, and it would not be claimed that if among the number of persons who travel, there were some who were sickly and diseased, but they would prefer to have physicians of their own choosing. This, indeed, is one of the fundamental difficulties of Dr. Herrick's plans, that the choice of physicians—like lawyers and preachers generally—is a matter of personal selection and preference; whereas, he seems to think that a doctor is a doctor, and that one doctor is about as good as another. All the world knows that such is not the fact. It may be true that one priest is as good as another; but not so with physicians and lawyers. Who is to select the medical staff which he would have saddled upon every railroad company? In order to determine a good doctor it is necessary one should know more than the average doctor does. At this time New York is agitated over the question whether a "regular" practitioner can, under any circumstances, consult with a homeopath.

It is true that vessels carrying passengers at sea are required to carry a ship's surgeon; and the reasons for this are obvious; though it may be still fairly questioned (surgery aside) whether ships would be better or worse off without the surgeons; and, indeed, there is a growing suspicion among biologists (and some responsible testimony might be cited to the point) that civilized communities at large would be better off if there were neither doctors nor apothecaries. This is not orthodox teaching in Louisiana, nor in the South generally; but the drift of enlightened practice is away from all the old drug-dosing customs, and toward distinctively hygienic and sanitary agencies, and foreshadows a time coming when there will be free competition in medicine as in other trades, and no close monopolies.

The suggestions in regard to hospitals and temporary quarantine stations are well enough in their way, as is also the suggestion that surgical instruments, splints, bandages and lint should be kept in adequate supply at the various stations and on passenger trains; but this is not new. Long ago the Baltimore and Ohio, the Central Pacific, and some other roads had railroad hospitals in full operation; and quite recently the Pennsylvania Railroad Company has been giving instructions to its conductors how to proceed in cases of first help to the wounded. Whatever the railroad companies themselves may voluntarily do must be presumed to meet some need, and to have some real merit, since they are the parties most interested in the safety of their passengers and the welfare of their employés; but all such efforts as Dr. Herrick seeks to popularize—of having the State thrust upon the public carriers any duties not strictly belonging to them—are in the wrong direction. There is a suspicion that the State may intermeddle too much—that its agencies are clumsy and unreliable. The political power can create offices, and men can be found to fill them and take the pay, but it is not so sure that they can or will perform the duties expected of them. Such an innovation savors more of the despotic polity of Europe than of free government.

Whatever the discussion may induce railroad companies themselves to do will be sure to inure to the benefit of the public. But to have legislation put a surgeon on board of every train, or circulating up and down a railroad, would be simply creating one more office to be obtained by political favor, which is inconsistent with strict attention to professional duty.

Superintendent.

The Cable Road in Chicago, most of the operating machinery of which was constructed by the enterprising firm of Poole & Hunt, of Baltimore, appears to have demonstrated during an exceptionally hard winter that it is less liable to obstruction than the horse railroads. During a recent snow blockade the horse cars could only make trips irregularly with teams doubled up, but the cable road, it is asserted, was not interrupted at all. The cable road in Philadelphia is now nearly ready for operations.

The *Northwestern Lumberman* has published a statement of the white pine in the northwest for the past ten years. In 1873 the output was 3,993,780,000 feet, and in 1882 it had grown to 7,504,737,864 feet. From 1873 to 1882 inclusive, the white pine cut in the Northwest reached the enormous amount of 47,539,323,874 feet.

The new Adirondack Railway Company, to which the road has been conveyed by the trustees of the purchasers at the mortgage sale, has assumed the management. George T. M. Davis of New York is president of the new company. C. F. Durkee continues as superintendent.

Who is it who, this time of yaire,
Doth growl and snort and loudly swaire,
And shake his fist and roach his haire,
And speak of things that are not faire,
And round about him fiercely glaire?
It is, it is the passengaire.

The Cincinnati, Indianapolis, St. Louis and Chicago Railway Co. has formed a traffic arrangement for through freight to Newport News with the Chesapeake and Ohio Railway Co. The rates will be the same as on other routes.

The Jackson & Sharp Company of Wilmington, Del., shipped ten first-class passenger coaches to the Illinois Central Railroad on the 6th inst.

Subscribe for the Railroad Journal.

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WE invite railroad officers to send us notice of elections, transfers, appointments, resignations, etc.; and all our readers would oblige us by furnishing for our columns any items of personal information, which may come to their knowledge, and are adapted to this department. We aim to record all new railway enterprises in the United States and Canada, and to note the progress of construction on all new roads and extensions; and we request all concerned in railway building to give us early information regarding the above, that our reports may be as complete as possible.

Subscribers are requested to report to our office any irregularity in receiving the JOURNAL.

Contributed articles relating to Railroad matters generally, Mining interests, Banking and Financial items, Agricultural development, and Manufacturing news, by those who are familiar with these subjects, are especially desired.

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THE TIDE-WATER TERMINALS OPPOSITE NEW YORK.

A VERY interesting problem in transportation to New York is just presenting itself at the surface. Mr. Vanderbilt of the New York Central and Hudson River, and Mr. Garrett of the Baltimore and Ohio, are both large owners in the stock of the Central Railroad Company of New Jersey. They have a common interest in preventing the control of that road passing into the hands of the Pennsylvania Railroad Company. Mr. Garrett's interest was acquired first; Mr. Vanderbilt coming in upon the entreaty of Mr. Gowen and the promise of an interchange of anthracite coal business, which the Central had lost by the extension of the Delaware, Lackawanna and Western to Buffalo. Mr. Garrett's purposes may be clearly discerned; he desired to have an extension of his system to New York, and the link between Baltimore and Philadelphia is now under construction.

There is a want of harmony among the owners as to how far these purposes shall be carried out. In the meantime the Lehigh Valley Railroad Company makes alternative proposals to the Central of New Jersey, viz: to run its trains from a point east of Bound Brook to Jersey City over the tracks of the Central, or, if that is not agreeable, to extend its line from Bound Brook to Newark and thence over the tracks of the Newark and New York Railroad, or by a continuation of its own line over the bed of the Morris and Essex Canal to Jersey City, where its late President, Packer, was shrewd enough to secure a small but well located tract of water-front property.

The question to be settled is whether the Central of New Jersey can accommodate all these diverse interests and keep harmony among its stockholders; or whether one class of holders will have to buy out their disinterested associates. The Central of New Jersey has ample terminal grounds fronting on New York Bay—the best of any road entering New York—and only lacks western connections to make it part of another great trunk line. Should the Baltimore and Ohio people be crowded out of their intended use of the Central, they can, without any sacrifice, make alliance with the Lehigh Valley, and build a separate line via Newark into New York.

On the other hand, should the Vanderbilt interest give way, it will admit the Baltimore and Ohio over the tracks of the Philadelphia and Reading, and so form a trunk line competition to this city as well as to Philadelphia and Baltimore.

Moreover, the Chesapeake and Ohio Railway will thus be able to reach New York from the southwest, over one or the other of these two systems from its Washington terminus.

New Jersey has a general railroad law which requires a deposit with the State Treasurer of $2,000 per mile on new road proposed to be constructed. This, however, would be no great obstacle to a company like the Lehigh Valley; as the distance to be built is less than thirty miles. The real difficulty is in the expense of the right of way. But this is offset in part by the fact that it will have a lucrative business from Jersey City and Newark, and has very valuable terminal grounds at tide-water. Indications point to an extension of the Lehigh Valley to New York, and the Philadelphia connection of the Reading can be made over the new line or the Central of New Jersey.

MISDIRECTED WARFARE.

THE anti-monopolistic tendencies of legislation in the present day serves to illustrate the evil that may arise from misdirected well-doing. Monopolies generally exist under the control of corporations, and for that reason the average legislator deems it his duty to strike not at the monopolistic features of a corporation, but at the corporation itself. So strongly has this perversion seized the public mind, that corporate bodies have difficulty in obtaining the rights and privileges they might claim as private individuals. This system of legal physic which is now administered in heroic doses, reminds us of the treatment of a doctor who would cure a fever by killing the patient.

A corporation is nothing more or less than a combination given individuality. It can sue and be sued, and is as much responsible for evil created in its name as the most humble of persons. To facilitate its existence and in return for the public benefit ensuing, a corporation is also granted certain privileges and immunities, but these are given in a purely selfish spirit; that the community granting them may reap its benefits more surely, not through any kind indulgence to aggregated wealth. Despite these self-evident facts, the anti-corporation warfare is relentlessly pursued, and as is usual in such cases, in the name of justice much injustice is exercised.

It is considered laudable to cheat a corporation, to harrass it with perplexing laws, to hinder its progress, and ruthlessly check any of its attempts to enrich its coffers and widen its influence. If in the course of a railroad's business, detentions arise from unforeseen causes, and public travel and traffic meet with a trifling delay, there is an outcry against the "insolence of greedy corporations," and a burst of indignation at the encroachment of monopolies.

A private individual may obstruct the sidewalks and streets with awnings and carriages at a wedding or reception at his residence, and no one complains, but let there be a freight car obstructing a street, or an express wagon barring a portion of the sidewalk, and the public are quick to demand the instant removal of these obstructions. The courtesies extended individuals are never allowed to corporations, though the public may daily experience a hundred benefits from the latter and none from the former.

The State of New Jersey has for years been the scene of an irrepressible conflict between the people and the railroads crossing its territory. A seeker for legislative honors in Jersey may now scarcely hope for election unless at the outset he avows himself as inimical to railroad interests. Yet how great a portion of New Jersey's prosperity is due to the operations of these railroad corporations. How many towns have sprung up and grown to cities of importance simply through the existence of these "greedy corporations"—what vast tracts of worthless marsh lands have been improved and converted into valuable property by these same corporations. Private fortunes have been realized through the benefits created by railroad, and yet the possessors of this wealth are generally among the first to oppose the corporations, and kick over the ladder upon which they climbed. It is claimed in New Jersey that the railroads are seeking to evade a just taxation of their property, and yet much of this property was worthless before it was improved by its present owners. No one would feel disposed to blame an individual if he sought to lessen the tax upon property, the sole value of which arose through his own improvements and exertions, yet this effort on the part of a corporation becomes arrogant presumption.

Far be it from us to uphold or extenuate injustice and oppression on the part of either individual or corporation. We simply ask that they be treated alike. The courts are always open to redress the wrongs of suffering humanity, and a corporation is responsible before the law for its own acts. Difficulties thrown in the path of incorporated bodies seeks to discourage the combination of individual wealth, without which national progress is impossible. Of all corporations railroads rank first in importance, and railroad legislation should encourage the formation and growth of railroads. If they overstep the limits of their rights and privileges, let them answer to the law for such violation, but it is absurdly unjust to pass harrassing laws for all because a single instance of abuse of power has been noted.

The Anti-Monopoly party may enjoy a long and useful life if it confines its efforts to the remedy and prevention of abuses on the part of capital whether individual or incorporate, but it will shortly go to pieces if it continues a mad crusade against all corporations with no other *casus belli* than the fact of their general wealth and opportunities for oppression, and without regard to their usefulness or influence upon the prosperty of nation, state and city.

Parlor Cars for the Canadian Pacific Railway.

The following description of two new parlor cars recently constructed for the Canadian Pacific Railway is from the Montreal *Witness:*

Their exterior is of very highly polished mahogany with very elegant gilt ornamentations, the exceedingly broad windows enhancing greatly the rich appearance of the whole. They ride upon forty-inch Krupp wheels and are furnished with all the latest improvements as far as riding is concerned. It would be difficult in a cursory sketch to do justice to the elegance of the interior. At either end of each car is a spacious smoking apartment, capable of accommodating eight people, and very handsomely upholstered in dark colored leather. The lavatories are conveniently large and well appointed, while the main body of the car is a most luxurious parlor. The windows are very wide, giving a cheerful light to the car and affording the greatest facility for observation. They are also provided with the latest improvements in dust screens. The interior of the car is beautifully finished mahogany, with festoons of flowers in inlaid satin and rosewood. Between the windows and at the ends are very handsome plate glass mirrors with small rosewood borders. The roof is of oak with ornamentations. The chairs are exceedingly comfortable, upholstered in rich crimson velvet, contrasting well with the dark carpet on the floor. Altogether these cars, the "Lachine" and "Carillon," are certainly among the finest ever brought into Canada. They begin running to-day, one in the morning and the other in the evening.

Production of Pig-Iron in 1882.

The American Iron and Steel Association has received reports from all the makers of pig-iron in the United States, and officially announce that the quantity of pig-iron made in 1882 was 4,623,323 tons, which is almost half a million tons more than ever before made in one year in this country. The production of 1881 was 4,144,254 tons. The production of the different kinds of pig-iron in 1881 and 1882 was as follows in gross tons:

	1881.	1882.
Bituminous	2,025,236	2,176,855
Anthracite	1,548,627	1,823,338
Charcoal	570,391	623,130
Totals	4,144,254	4,623,323

The stock of pig-iron held unsold in the hands of makers at the close of 1882 was 383,655 tons. At the close of 1881 the stock on hand was 188,300 tons.

Subscribe for the Railroad Journal.

THE FUTURE GROWTH AND INFLUENCE OF AMERICA.

A MOMENTOUS and almost startling paper has been read by Mr. Robert Giffen—a gentleman of high scientific and commercial attainments—before the Statistical Society of London, of which he is President, the echoes of which are already finding lodgment among thinkers on the other side of the ocean. Inasmuch as it concerns largely the future of interchanges of products between America and Western Europe, and incidentally the political relations between the United States and European countries—not to speak of the international relations of the five great powers of Europe—we have thought it proper to reproduce some of its most salient features.

After discussing the ability of the five great powers to feed their own peoples, and the relation of Ireland and India to Great Britain in that respect, Mr. Giffen says, as to the population and power of production of North America (and this is what more particularly concerns the land holding, farming and transporting classes in our own country):

INCREASE IN NUMBERS.

The last broad fact I shall refer to as presented, and made familiar to us by these statistics of population, is that of the growth of population in the United States, a subject, perhaps, of even greater interest than any I have yet referred to, and involved as it is in fact with one or two interesting questions already glanced at, viz., the existence and increase of large European populations which are supported by imports of food from new countries, and mainly from the United States.

The broad fact presented by the United States is that of the doubling of the population in periods of about twenty-five years. There is a little doubt about the exact population at the time of the War of Independence, and down to the first census at the beginning of the present century, but for the present purpose the figures we get are good enough:

	In Mlns.		*In Mlns.*
1780	3.0	1840	17.1
1790	3.0	1850	23.2
1800	5.3	1860	31.4
1810	7.2	1870	38.5
1820	9.6	1880	50.1
1830	12.9		

In other words, the population of the United States has multiplied itself by sixteen in the course of the century—this being the result of its doubling itself every twenty-five years for that period. In another twenty-five years, at the same rate of increase, the population will be 100,000,000, in fifty years 200,000,000, in seventy-five years 400,000,000, and at the end of a century 800,000,000! Such is the first aspect of the broad fact presented to our consideration by the increase of population in the United States. The rate is such as to be fairly bewildering in its probable consequences. The phenomenon is also without a precedent in history. There has been no such increase of population anywhere on a similar scale, and

above all, no such increase of a highly civilized and richly fed population. The increase is not only unprecedented in mere numbers, but it is an increase of the most expensively living population that has ever been in the world. For the idea of such an increase we are indebted exclusively to statistics. The United States, among the other new ideas of old civilizations they have had the benefit of, have had the idea of a periodical census, which is even made a part of their Constitution, and as the result we have before us, not only in a general way, but with some precision, so that discussion may have an assured basis, this phenomenon of an unprecedented increase of population, which is, perhaps, the greatest political and economic fact of the age.

BALANCE OF POLITICAL AND FINANCIAL POWER.

The fact has altered, in the first place, the whole idea of the balance of power of the European nations. A century ago the European nations in their political relations thought little but of each other. Now the idea of a new Europe on the other side of the Atlantic affects every speculation, however much the new people keep themselves aloof from European politics. The horizon has been enlarged, as it were, and the mere fact of the United States dwarfs and, I think, restrains the rivalries at home. European Governments can no longer have the notion that they are playing the first part on the stage of the world's political history. And this sense of being dwarfed will probably increase in time. In this country, at any rate, we cannot but feel greatly attracted by the United States. Because of the magnitude of that country, the European continent is less to us—our relations are elsewhere.

It is in connection, however, with our own home problems of population that the increase of the United States is most interesting to us. The increase is partly at our expense, and at that of the other European nations. If the United States or some other new country had not received our emigrants, it is quite clear that our whole history would have been different from what it is. We should either have had in our midst the people who emigrated, and their descendants, straining the resources of our soil and mines and capital, or the pressure upon these resources would have checked in various ways the growth of the population itself, so that probably, at this moment, but for the new countries, more people would now be living in the United Kingdom than there are, and larger numbers of the population would be paupers, or on the verge of pauperism. The actual numbers we have lost altogether, and specially to the United States, have been:

	To United States.	*Altogether.*
Before 1820	50,000	123,000
1820–30	100,000	247,000
1830–40	308,000	703,000
1840–50	1,094,000	1,684,000
1851–52	511,000	704,000
1853–60	805,000	1,312,000
1860–70	1,132,000	1,571,000
1870–80	1,087,000	1,678,000
Total	5,087,000	8,022,000

Some correction of these figures would be necessary in the earlier years for foreigners included, and in the later years for persons returning home, but the correction in the present view would make no material difference. If these people had not emigrated, and had increased as the rest of the population has done at home, the existing population in the United Kingdom would now be many millions more than it is. The difference made by the emigration to the United States alone must be a good many millions.

THE FOOD SENT OUT OF THE UNITED STATES.

The influence of the United States and other new countries has been greater still. On a rough calculation, about twelve millions at least of the people of the United Kingdom live on imported food, and a certain part of the population of Germany, France, Belgium, and Holland also live on imported food—the importations being mainly from the United States. These new countries, therefore, not only have permitted an increase of population in a century, till it is sixteen times the population at starting, but a much larger increase. To take the United States alone, we cannot estimate its contribution to the support of foreign populations at less than an amount equal to the support of a population of ten millions, similar in character to that of the United Kingdom. Its exports of breadstuffs and provisions are now about ninety million pounds annually, at the value as they leave the United States; and at £9 per head, corresponding approximately to a value in the United Kingdom of £11 per head, which is about our consumption of agricultural products per head, this would be equal to the support of ten million persons. In other words then, the United States, from supporting three millions of people a century ago, are now supporting at least sixty millions—virtually an increase of twenty times the original number. The growth of population thus becomes more astonishing than ever. Altogether there must be about fifteen millions of people in Europe supported by the produce of the new countries; and adding together the populations of Canada, Australia, and the United States to this fifteen millions, less a deduction for the population in these countries a century ago, there remains a total of about seventy millions of European population, or nearly one-fourth of the population now living in Europe, which is supported by the produce of newly opened regions. To make these figures quite exact, a correction ought to be made on account of the non-European element in the population of the United States, the colored population in 1880 being six and one-half millions. The colored population in the United States, however, is brought into competition with the European, and in some degree Europeanized. The history of Europe, we may well say, would have been entirely different from what it has been during the last century but for the new countries. It is difficult, indeed, to overestimate the extent to which the existence of a new field for population, such as the United States presents, has dominated the recent economic history of Europe. We are so accustomed to a set of economic circumstances in which population, constantly increasing in numbers and in the capacity for food consumption per head, finds practically unlimited means of expansion, that we can hardly understand economists like Malthus, who were oppressed by the only too evident limits which nature, at the time he wrote, had apparently set.

GROWING SCARCITY OF GOOD LANDS.

The bare statement of such figures appears to me quite enough to indicate that the present economic circumstances of the European family of nations, including the United States as an offshoot and part of the family, are not likely to continue for more than a generation or two. We are within measurable distance of very great changes. No doubt there are other new lands—in Australia, in Canada, at the Cape, and elsewhere—which will be more or less available in the future; but, singly, the United States is so much the larger field, that the influence of these other new lands need not be considered. Assuming the United States to possess only half the area of new country available for the European races, a single doubling of the population, after the United States has been filled up—the work of a generation or two—would absorb all these other new lands; their existence only postpones the date, when they will all be in the position calculated for America alone at the end of a century, by thirty years or so. In the course of a century then we may affirm that the present economic circumstances of the European races which make possible an indefinite expansion of the numbers of the people coupled with an increase of their consuming power, will have entirely changed.

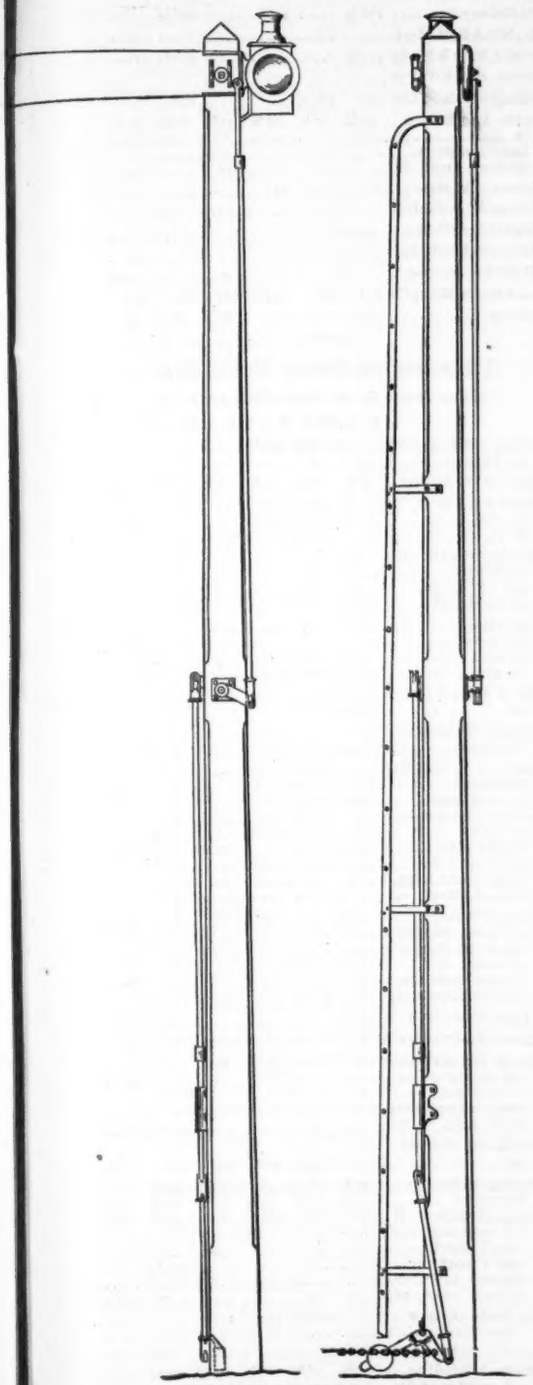
The facts appear to me so interesting that I ask leave to add something more, though the figures I have now to give you, while easily accessible, are not quite so much on the surface, and have not been popularized. These figures relate to the actual appropriation of land for settlement, and the actual growth of population in the new and old States respectively. What I wish to bring out is that a much larger portion of the available area of the United States has been "taken for settlement" than is commonly imagined; that, in fact, not only the thirteen original States and their three subsections have been so taken for settlement, but what are known as the Western States, exclusive of the Pacific Territories, have also been taken for settlement; that the growth of rural population in this second group of States has now brought them nearly to the level of the rural population in the older States; that there is no longer much room for growth by taking up new lands in all these portions of the States; that the remaining available area is so small as to render inevitable its being taken for settlement before very long; and that, from this point, probably within twenty or thirty years, the new economic circumstances I have been referring to must make themselves felt.

It is reported by telegraph that two of the companies that have applied for a charter from the Massachusetts Legislature to build a canal across Cape Cod are willing to place in such Trust Company as the Government may direct, a certain sum for a guarantee of good faith. One company will give a bonus of $100,000, and the other $200,000. Each will give more if called for. Their charters have been carefully read, and on the face the above guarantee is inserted.

I have lived to know that the secret of happiness is never to allow your energies to stagnate.—*Adam Clarke.*

Interlocking Switch and Signal Apparatus.

[*Continued from page* 126.]



SEMAPHORE SIGNAL AND POST.

SIGNALS.

The signals employed in this system may of course be of any description adapted to being operated by positive movements, but the great preference is for the Semaphore signal, which has been found so superior to all the other types that it is rapidly superseding all the other signals. As shown, the Semaphore signal, as applied to railway traffic, consists of a vertical post which has one or more movable arms pivoted to it at their upper ends, and these arms are capable of being moved through a right angle. When the arm is raised to the horizontal position, as shown, it means "Stop," or "Danger"; and when the arm is hanging down at an angle of say thirty degrees, it denotes "All right." The Semaphore signal post often has, at stations or junctions, two or more arms one above another, but in all cases the arms on one side refer to trains proceeding in one direction.

At complicated junctions or stations the signals are sometimes arranged on a girder or platform spanning the tracks. The signals should always be elevated to a considerable height, so as to be seen from a distance over intervening objects.

The signals are termed respectively "Distant" and "Home" signals, according to their position. The "Distant" signals are usually placed far enough from the "Home" signals to allow a train approaching the signal cabin to be brought under control after the "Distant" signal is seen by the engine-driver, so that the train may be stopped at the home signals. The "Distant" signals will require to be 1,200 to 2,200 feet from the signal cabin, according to the conditions for observing the signal from the locomotives.

The "Distant" signal is mounted on a post thirty to forty feet high, as the situation may require. The Semaphore arm is about four feet long and one foot wide, made of wood with an iron head piece to which the moving rod is attached. The end of the head piece is a large ring or spectacle with red glass. At night a powerful lamp is placed behind the spectacle so that when the Semaphore is raised to the horizontal position the spectacle is before the lamp and shows a brilliant red light, and when the Semaphore arm is lowered the spectacle passes above the lamp and the light shows white. The lamp is provided with lenses which project the light in a powerful direct ray that can be seen a great distance. The Semaphore also carries on the side next the signal cabin, a small spectacle with blue glass, by which at night to indicate to the switchman in the signal cabin the position of the arm. To afford access to the lamp a strong iron ladder is secured to the post, as shown in the side elevation left out in front elevation to show other parts.

The "Home" signals are usually placed a few yards in the front of stations, junctions, switches, or other points at which obstruction may be expected, and should be understood as indicating the point to which trains may draw when the signal is at "Danger." Enginemen should not be called upon to exercise discretion in stopping at some distance before a signal. The home signal should just be placed at the position engines are required to stop.

In all cases signals should be counterweighted, so that their tendency is to assume the position indicating danger; thus if the rod or wire by which they are worked should break, the signal at once flies to "Danger" and stops the traffic, and the worst that can happen is delay.

The arrangement on the post for moving the signal by the pull of the wire is very simple. The wire (or chain at the end of the wire) is attached to a weighted lever fixed at the foot of the post, and connected with the arm so that the pulling of the wire will raise the rear end of the arm and depress the signal. In case the wire should break at any place, even close to the signal cabin, the weight at the signal post is sufficient to pull the wire towards the signal post, and let the Semaphore arm fly back to its normal position of "Danger." Thus, a breaking of the wire connection can cause only delay and cannot lead to an accident from a safety signal being improperly displayed.

In this system all the "Home" signals are worked by rod connections, making positive movements, the same as the switches and locks. The "Distant" signals are worked by wires, connected with the levers which are usually those at the ends of the lever frame. To work "Distant" signals placed at proper distances from the signal cabin by rod connections becomes well nigh impracticable from the weight of the rods or pipes to be moved, while with wire the "Distant" signals may be worked at great distances.

[TO BE CONTINUED.]

The New York and New England Railway's direct connection with the South around New York City, which was temporarily broken by needed repairs to the steamer Maryland, will be renewed on the 18th inst., when the Maryland will resume her trips from Harlem River. It is proposed to shorten the time between Boston and Washington one hour and a half, and also to improve the service between Washington and Boston. The January traffic over the New York and New England at Newburg, its Hudson River terminus, is rapidly increasing. In January there were transferred across the river eastward 3,025 loaded and 28 empty freight cars, including 1,674 loaded with coal. The movement west comprised 724 loaded and 3,006 empty cars.

The Illinois Central Railroad Company announces the completion of arrangements for the sale of through tickets from Chicago to San Francisco. The route will be over its line to New Orleans, and thence to San Francisco over the Southern Pacific. The rates will be the same as by other lines. The route is 500 miles longer than by the Central and Union Pacific, but the managers believe that the greater comfort of winter travel by the Southern route will induce many to go that way.

It is rumored that the Wissahickon, Roxborough and Barren Hill Passenger Railway, now operated as a horse-car line between Wissahickon station, through Roxborough to Barren Hill, will likely fall into the hands of the Philadelphia and Reading Railroad Company. Its franchises admit of the use of steam, and are valuable on that account.

Thomas Drein & Son of Wilmington, Del., have been awarded contracts to build ten twenty-four feet metallic life-boats and six sea-going life-rafts for Cramp & Sons of Philadelphia and two eighteen feet metallic life-boats for the steamer Pensacola, which is now at the works of the Harlan & Hollingsworth Company.

The automatic signal system has been placed on the Philadelphia, Wilmington and Baltimore Railroad between Lamokin and Eddystone stations.

The Stock Exchanges and Money Market

New York Stock Exchange.

Closing Prices for the week ending Feb. 13.

	W. 7.	Th. 8.	F. 9	Sat. 10.	M. 12.	Tu. 13.
Adams Express	135	.....	135	135	.....	135
Albany and Susq.	131	.....	.....	.....	.....	.....
1st mortgage	.....	111	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
American Express	.....	92	91	90⅝	91⅛	.....
Burl., C. R. & Nor.	.....	81⅛	.....	.....	.....	82
1st mortgage 5s	100⅝	100⅝	101	.....	.....	.....
Canada Southern	67¼	67⅞	68	68	67	67⅛
1st mortgage guar	94⅛	94⅞	94⅞	95	95	95
Canadian Pacific	..	.....	.....	.....	61¼	60
Central of N. Jersey	72	72⅜	73¼	73¼	72¼	72⅜
1st mort. 1890	.....	.....	.....	.....	.....	.....
7s, consol. ass	.....	.....	.....	.....	.....	.....
7s, convertible ass	.....	.....	.....	.....	110	.....
7s, Income	.....	.....	.....	.....	.....	.....
Adjustment	.....	106⅛	.....	.....	.....	106¼
Central Pacific	80⅞	80⅜	81⅜	83¼	81½	80⅛
6s, gold	.....	113⅝	113⅜	113⅝	113⅜	.....
1st M. (San Joaq)	.....	.....	.....	.....	.....	.....
1st M. (Cal. & Or.)	.....	.....	103⅜	.....	.....	103⅛
Land grant 6s	.....	.....	.....	.....	.....	.....
Chesapeake & Ohio	22	20¾	21⅛	22¾	23	23⅜
1st pref	30	32	.....	.....	31⅞	.....
2d pref	.....	23½	23	25⅜	24⅛	.....
1st mort., series B	90⅛	90⅛	91⅛	91	.....	90⅜
Chicago and Alton	.....	.....	135	135⅛	.....	135⅛
Preferred	.....	.....	.....	140	.....	.....
1st mortgage	.....	.....	.....	.....	.....	.....
Sinking Fund	.....	.....	.....	.....	.....	.....
Chi., Bur. & Quincy	119¾	118⅝	119	119¼	118	119
7s, Consol. 1903	127⅛	.....	.....	.....	127¼	127
Chi., Mil. & St. Paul	101⅛	102	102¼	102⅛	100⅜	100⅞
Preferred	117	117⅜	118⅜	118⅛	118	.....
1st mortgage, 8s	131	.....	131⅛	.....	131⅛	.....
2d mort., 7 3-10s	.....	.....	.....	.....	.....	.....
7s, gold	.....	.....	.....	.....	.....	.....
1st M. (La. C. div)	.....	.....	.....	118	.....	.....
1st M. I. & M. div.)	.....	.....	.....	.....	.....	.....
1st. M. (I. & D. ext.)	.....	.....	.....	.....	.....	.....
1st M. (H. & D. div.)	.....	.....	.....	118	.....	.....
1st M. (C. & M. div.)	.....	.....	.....	.....	.....	.....
Consolidated S. F.	120	.....	.....	.....	123	.....
Chi. & Northwestern	130⅝	131⅞	131⅛	131⅛	130⅛	130
Preferred	145⅛	145⅛	145⅝	145⅛	144⅜	144¼
1st mortgage	.....	.....	.....	.....	.....	105
Sinking Fund 6s	.....	110	.....	.....	.....	.....
Consolidated 7s	131	.....	131¼	.....	.....	131
Consol. Gold bo'ds	125	.....	125¾	124	124¾	124¾
Do. reg	..	..	.....	.....	.....	.....
Chi., R. Isl. & Pac.	122⅜	123⅜	123¼	123⅛	123	122⅛
6s, 1917, c	124¾	.....	.....	.....	.....	.....
Clev., Col., Cin. & Ind.	.....	.....	77¾	77⅛	77⅛	.....
Clev. & Pittsburg gr.	.....	.....	.....	.....	.....	.....
7s, Consolidated	.....	.....	.....	.....	.....	.....
4th mortgage	.....	.....	.....	.....	.....	.....
Col., Chi., & Ind. Cent	4	.....	4¼	5	5	5⅛
1st mortgage	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
Del. & Hud Canal.	107⅛	108	108⅛	108⅜	108⅛	106⅛
Reg. 7s, 1891	.....	.....	.....	.....	.....	.....
Reg. 7s, 1884	.....	.....	.....	.....	.....	103⅜
7s, 1894	.....	115⅛	.....	.....	.....	.....
Del., Lack. & Western	121¼	121⅞	121⅞	122	120¾	119⅜
2d mortgage 7s	.....	.....	.....	.....	.....	.....
Consol. 1907	.....	.....	.....	.....	.....	.....
Erie Railway	.....	.....	.....	.....	.....	.....
1st mortgage	.....	.....	.....	.....	.....	.....
2d mort. 5s, ext.	.....	.....	.....	.....	.....	.....
3d mortgage	.....	.....	.....	.....	.....	.....
4th mort. 5s, ext	.....	.....	.....	.....	.....	.....
5th mortgage	.....	.....	.....	.....	.....	129¾
7s, Consol. gold	130	.....	.....	129	129	.....
Great West. 1st mort	.....	.....	.....	105	.....	.....
2d mortgage	.....	.....	.....	.....	.....	100
Hannibal & St. Jo.	40	.....	.....	.....	.....	.....
Preferred	82½	83	83¾	85	84	84½
8s, Convertible	.....	.....	.....	108	.....	108⅛
Houston & Tex. Cen	.....	.....	.....	.....	.....	.....
1st mortgage	.....	.....	.....	.....	107⅛	.....
2d mortgage	120	.....	.....	.....	.....	.....
Illinois Central	145⅛	145¾	146⅜	146⅜	143¾x	144⅜
Lake Shore & Mich So	110¼	110⅜	110¼	110¼	109	108⅞
Consol. 7s	.....	.....	.....	.....	.....	.....
Consol. 7s, reg	.....	.....	.....	..	.....	.....
2d Consolidated	.....	.....	.....	.....	.....	.....
Leh. & W. B. con. ass	104⅛	.....	.....	.....	.....	104⅞
Long Dock bonds	117	117	.....	.....	.....	.....
Louisville & Nash.	55⅛	53¾	56	56	54⅝	54¼
7s, Consol. reg	117	.....	.....	.....	.....	.....
Manhattan	.....	.....	46⅛	53¼	53¼	.....
1st pref	.....	.....	.....	.....	.....	.....
Met. Elevated	.....	.....	.....	85	84¼	.....
1st mortgage	.....	.....	.....	97	97⅞	97⅜
Michigan Central	95	96⅛	95⅝	96	95	94⅛
7s, 1902	.....	.....	125⅛	.....	.....	.....
Morris & Essex	121⅛	.....	121¼	.....	.....	122¾
1st mortgage	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
7s of 1871	.....	.....	.....	.....	.....	.....
7s, Convertible	.....	.....	122	.....	.....	.....
7s, Consolidated	.....	.....	.....	.....	.....	.....
N. Y. Gen. & Hud. R.	125⅛	127⅛	126⅜	126¼	125⅝	125⅝
6s, S. F. 1883	.....	.....	.....	.....	101¾	.....
6s, S. F., 1887	.....	.....	.....	.....	.....	107⅝
1st mortgage	.....	.....	.....	.....	130	130
1st mortgage, reg.	.....	.....	.....	.....	.....	.....
N. Y. Elevated	.....	.....	.....	.....	.....	.....
1st mortgage	116	116	115¾	.....	.....	.....
N. Y. & Harlem	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	.....	.....
1st mortgage	.....	.....	.....	.....	.....	.....
1st mortgage, reg	..	.....	.....	.....	.....	.....
N. Y. Lake Erie & W	37⅛	37⅛	37⅛	37⅝	36⅜	36⅜
Preferred	79¾	79	79⅛	.....	78⅜	.....
2d Consolidated	96⅛	96	96	.....	96	95⅛
New 2d 5s fund	.....	.....	.....	95	.....	93⅜
N. Y., N. Hav'n & Hart	.....	.....	172	.....	172	.....
North Mo. 1st mort	.....	.....	.....	.....	.....	.....
Northern Pacific	47⅜	48⅛	48⅜	48⅜	47⅝	.....
Preferred	83¼	83⅛	83⅝	83⅜	82⅝	.....
Ohio & Mississippi	31¼	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
Consolidated 7s	..	..	116	.....	.....	.....
Consol. S. Fund	116⅛	.....	.....	.....	.....	116
Pacific Mail S. S. Co	41⅜	41⅜	41⅛	42⅛	41⅜	42⅛
Pacific R. R. of Mo.	.....	.....	.....	.....	.....	.....
1st mortgage	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
Panama	.....	.....	.....	.....	.....	.....
Phila. & Reading	53⅛	53⅝	53⅜	54⅞	54⅛	54
Pitts., Ft. W. & Chi. gtd	136¼	.....	.....	.....	135	.....
1st mortgage	136	136	.....	.....	.....	.....
2d mortgage	..	.....	.....	.....	.....	.....
3d mortgage	.....	.....	.....	.....	.....	.....
Pullman Palace Car	120	.....	121	121¾	122	.....
Quicksil'r Min'g Co	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	.....	.....
St. Louis & San Fran	30½	30⅛	32	31⅜	30⅝	30⅜
Preferred	50	50⅜	50⅞	51⅜	50	50⅛
1st Preferred	.....	.....	.....	.....	.....	..
St. L., Alt'n & T. H.	64	65	66	68	66¼	65
Preferred	.....	.....	97	98	98	.....
1st mortgage	.....	.....	.....	.....	.....	.....
2d mort. pref	.....	.....	.....	.....	.....	108
Income bonds	.....	.....	.....	104	.....	105
St. L., Iron Mt. & S.	.....	.....	.....	.....	.....	.....
1st mortgage	113⅛	.....	.....	113⅜	.....	.....
2d mortgage	.....	.....	.....	.....	.....	103
Toledo and Wabash	.....	.....	.....	.....	.....	.....
1st mortgage	.....	.....	.....	.....	106⅛	.....
2d mortgage	..	..	.....	100¾	.....	101
7s, Consolidated	.....	.....	.....	.....	.....	.....
St. Louis Division	.....	.....	101⅛	.....	.....	.....
Union Pacific	92¾	94¼	94¾	95¼	93⅜	93
1st mortgage	113⅛	113⅜	114	114	113¾	114
Land Grant 7s	..	.....	110	110	.....	.....
Sinking Fund 8s	.....	.....	.....	119	.....	.....
United States Ex	.....	.....	63	.....	62	.....
Wabash, St. L. & Pac	31⅛	31⅛	31⅛	32⅜	31⅛	31
Preferred	51⅜	51⅜	52	52⅜	51⅛	51⅜
New mort. 7s	.....	.....	.....	.....	.....	.....
Wells-Fargo Ex	124½	.....	.....	.....	.....	.....
Western Pacific b'ds	.....	110	.....	.....	.....	.....
Western Union Tel.	81½	82¼	83⅜	83⅜	82¼	81⅜
7s, S. F conv., 1900	.....	117⅛	.....	.....	117	.....
FEDERAL STOCKS:—						
U. S. 4s, 1907, reg	119⅝	119⅝	.....	.....	.....	.....
U. S. 4s, 1907, coup	.....	119⅝	119⅝	119⅝	.....	119⅝
U. S. 4½s, 1891, reg	.....	.....	.....	.....	.....	112¾
U. S. 4½s, 1891, coup	.....	.....	113¾	.....	.....	.....
U. S. 5s, cont'd at 3½	.....	.....	.....	.....	.....	.....
U. S. 3s, reg	104	.....	103⅜	.....	.....	.....
Dt. of Col. 3-65s, reg	.....	.....	.....	.....	.....	.....
Dt. of Col. 3-65s, coup	108¼	.....	.....	.....	.....	.....

Boston Stock Exchange.

Closing Prices for the Week Ending Feb. 13.

	W 7.	Th. 8.	F. 9.	Sat. 10.	M. 12.	Tu. 13.
Atch., Top. & San. Fe.	80⅜	80⅝	81¼	82⅛	81⅞	81
1st mortgage	....	121	121	121⅛	.....	.....
Land Grant 7s	.....	.....	.....	113½	.....	.....
Boston & Albany	176	175⅛	175	175¼	176	176
Boston and Lowell	.....	100	98⅛	97⅛	.....	97
Boston & Maine	155⅛	155⅛	155⅛	155⅜	155⅜	....
Boston & Providence	160⅜	.....	.....	.....	.....	.....
Bos'n, Hart. & Erie 7s	.....	.....	.....	.....	.....	.....
Burl. & Mo. R. L. G. 7s	.....	.....	.....	.....	.....	.....
Burl. & Mo. R. in Neb	.....	.....	.....	.....	.....	.....
6s, exempt	.....	113⅛	113	113	.....	.....
4s	.....	.....	.....	80⅛	.....	81
Chi., Burl. & Quincy	119	118⅜	118⅜	119⅛	118	118⅜
Cin., Sand. & Clev ($50)	22	.....	.....	.....	.....	.....
Concord ($50)	.....	101	101⅛	101⅛	.....	.....
Connecticut River	.....	.....	.....	.....	.....	.....
Eastern	46¼	47	.....	.....	45¼	46
New 6s, Bond	.....	110⅜	109⅜	.....	.....	.....
Fitchburg	116	117	117	117	.....	.....
N. Y. & New England	46	.....	47½	47½	47¾	47¾
7s	115	.....	.....	114¾	114¾	114¾
Northern N. H	.....	111	.....	.....	.....	.....
Norwich & Worcester	.....	160	.....	.....	.....	.....
Ogden & Lake Cham	.....	.....	.....	.....	.....	.....
Old Colony	136½	.....	136	.....	136½	.....
Ph., Wil. & Balt. ($50)	.....	.....	.....	.....	.....	.....
Portl'd, Saco & Ports	112½	.....	.....	.....	112½	.....
Pueblo & Ark Val 7s	.....	.....	.....	113¼	.....	.....
Pullman Palace Car	120	120½	.....	.....	122	.....
Union Pacific	92⅞	93⅛	94⅛	95⅜	93¾	93⅛
6s	.....	.....	.....	.....	.....	.....
Land Grant 7s	.....	.....	.....	.....	.....	.....
Sinking Fund 8s	.....	.....	.....	115	.....	.....
Vermont & Mass	.....	.....	131	.....	.....	.....
Worcester & Nashua	.....	.....	.....	.....	.....	.....
Cambridge (Horse)	94⅛	.....	.....	.....	.....	.....
Metropolitan (Horse)	.....	.....	.....	.....	.....	.....
Middlesex (Horse)	.....	.....	.....	.....	.....	100½
Cal. & Hecla Min'g Co	242	243	243	243	243	243
Quincy	50	51	.....	51	51	51

Philadelphia Stock Exchange.

Closing Prices for the Week Ending Feb. 13.

	W. 7.	Th. 8.	F. 9.	Sat. 10.	M. 12.	Tu. 13.
Allegh'y Val. 7 3-10s	.....	122¾	122¾	.....	.....	122¾
7s, Income	48	48	.....	.....	.....	47
Buff., Pitts & West.	16¾	16¾	16½	16½	16¼	16¼
Camd'n & Am. 6s, '83	.....	.....	.....	.....	.....	.....
6s, 1889	.....	.....	.....	.....	.....	.....
Mort. 6s, 1889	.....	.....	.....	112	.....	.....
Camden & Atlantic	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	..	.....	.....	.....
1st mortgage	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
Catawissa	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	.....	57
2d pref	53	.....	.....	.....	.....	.....
7s, new	.....	120	.....	.....	.....	.....
Del. & Bound Brook	.....	.....	.....	.....	.....	.....
7s	124¼	.....	.....	.....	.....	.....
Elmira & Williamsp't	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	58½	.....
Hunt. & B. Top Mt.	.....	.....	.....	.....	.....	.....
Preferred	.....	.....	.....	.....	.....	.....
2d mortgage	.....	.....	.....	.....	.....	.....
Lehigh Navigation	39	39¼	39	39⅜	39	.....
6s, 1884	.....	.....	102⅜	.....	102⅜	.....
Gold Loan	.....	.....	.....	.....	.....	111½
Railroad Loan	.....	.....	.....	.....	.....	116½
Conv. Gold Loan	.....	.....	.....	.....	.....	.....
Consol. Mort, 7s	.....	117½	117⅞	.....	.....	.....
Lehigh Valley	64⅞	65	65	65	65	64⅞
1st mort. 6s, coup	.....	.....	.....	.....	.....	.....
1st mort. 6s, reg	.....	.....	.....	.....	.....	.....
2d mort. 7s	.....	.....	.....	.....	.....	.....
Consol mort. 6s	.....	.....	.....	.....	.....	123
Consol. mtg. 6s, reg	.....	121¼	.....	.....	.....	.....
Little Schuylkill	.....	.....	.....	.....	59	58½
Minehill & Sch. Hav'n	63	.....	63	63	63	.....
North Pennsylvania	67	.....	67	67	.....	.....
1st mortgage 6s	.....	.....	.....	.....	.....	103⅜
2d mortgage 7s	.....	.....	.....	.....	.....	.....
Genl. mtg. 7s, coup	.....	.....	.....	.....	.....	.....
Genl. mtg. 7s, reg	.....	.....	.....	.....	.....	.....
Northern Central	.....	.....	.....	.....	55	55
5s	.....	99⅞	100	100	100	95⅛
Northern Pacific	47⅝	48¼	48	48⅛	47⅜	47⅝
Preferred	83¼	83⅜	83⅜	83⅜	82⅝	82⅜
Pennsylvania R. R.	60	60	60	60	59⅝	59⅜
1st mortgage	.....	.....	.....	.....	.....	.....
Gen'l mort	.....	.....	.....	.....	.....	.....
Gen'l mort reg	.....	.....	.....	.....	125⅛	.....
Consol. mort. 6s	.....	.....	.....	.....	.....	.....
Consol. mort. reg	.....	120	.....	.....	.....	119½
Pa. State 5s, new	.....	117¼	117	117	.....	.....
do 4s, new	.....	.....	.....	.....	.....	.....
do 3½s, 1912	.....	.....	.....	.....	.....	.....
Phila. & Reading	26¾	26⅞	26⅞	27⅛	27⅜	27⅛
1st mortgage 6s	.....	.....	.....	.....	.....	.....
7s of 1893	.....	.....	.....	.....	120⅜	.....
7s, new convert	75	75¾	73¼	75⅜	76	.....
Consol. mort. 7s	.....	125½	.....	.....	.....	.....
Consol. mort. reg	.....	125	125½	.....	.....	.....
Gen'l mort. 6s	94¾	94⅜	94¾	95	95⅛	95
Def. Income bonds	.....	.....	.....	.....	.....	.....
Philadelphia & Erie	.....	.....	.....	19¾	.....	.....
1st mortgage 5s	.....	104¾	105	105	.....	105
2d mortgage 7s	.....	.....	.....	112½	.....	.....
Pittsb., Cin. & St. L. 7s	.....	.....	.....	.....	120⅛	.....
Pitts., Tit. & Buff. 7s	.....	.....	.....	.....	.....	.....
Schuylkill Navi't'n	.....	.....	.....	.....	.....	.....
Preferred	13⅜	13⅜	13⅛	13⅛	14⅜	.....
6s, 1897	.....	106½	.....	.....	.....	.....
6s, 1907	89¼	89¾	.....	.....	.....	.....
United Co. of N. J.	189⅜	190	190	.....	190	.....
Hestonville, (Horse)	.....	.....	.....	.....	.....	.....
Chestnut & Walnut	.....	.....	.....	.....	90	.....

Baltimore Stock Exchange.

Closing Prices for the Week Ending Feb. 12.

	Tu. 6.	W. 7.	Th. 8.	F. 9.	Sat. 10.	M. 12.
Baltimore & Ohio...	.....	.....	.....	.....	.....	.....
6s, 1885.....	.....	.....	.....	.....	.....	.....
Central Ohio ($50)...	.....	.....	.....	.....	.....	.....
1st mortgage.....	.....	.....	.....	.....	.....	.....
Marietta & Cincin'ti.	.....	.....	.....	.....	.....	.....
1st mortgage, 7s..	.....	.....	131⅜	131⅜	132¾	132¾
2d mortgage, 7s...	101⅛	101¾	102¾	103	104⅛	104⅜
3d mortgage, 8s...	54¼	54¾	54⅞	55	56	55⅞
Northern Cen. ($50).	.....	.....	55	.....	55¼	55¼
2d mort. 6s, 1885..	103¾	.....	.....	.....	.....	.....
3d mort. 6s, 1900..	.....	.....	.....	.....	.....	.....
6s, 1900, gold.....	.....	.....	114⅜	.....	114¾	.....
6s, 1904, gold.....	.....	.....	.....	113¾	114	.....
Pitts. & Connelsv. 7s.	.....	121	122	122	122	....
Virginia 6s Consol..	51½	51¾	51¼	51⅛	50	50
Consol. coupons...	45	49	.....	48½	.....	.....
10-40 bonds.....	40	.....	.....	.....	.....	40
Def'd Certificates.	.....	.....	.....	.....	.....	.....
New 3s.....	.....	48	....	.....	.....	.....
Western Maryland..	.....	.....	.....	.....	.....	.....
1st M., end. by Balt	.....	.....	.....	.....	.....	.....
2d M., do.	.....	.....	.....	.....	.....	.. ..
3d M., do.	.....	.....	.....	126	.....	.....
1st M., unendorsed	.....	112	.....	.....	.....	....
2d M., end. Wash Co	.....	.....	.....	...	.....	.....
2d M., preferred...	.....	.....	.....	.....	.....	....
City Passenger R. R.	.....	.....	.....	.....	.....	.....

London Stock Exchange.

	Closing Prices			
	Jan. 25.		Jan. 19.	
Baltimore and Ohio 5s, 1927.....	107	109	107	109
Central of N. J., $100 shares.....	70	75	70	75
Do. consol. mort.....	112	114	111	113
Do. Income Bonds.....	88	92	88	92
Central Pacific of Cal., $100 shs..	86	87	90⅜	91⅛
Do. 1st mort. 6s, 1895-'98.....	116	119	115	117
Det., G'd Haven & Mil. Equip bds.	118	120	118	120
Do. Con. M. sp. c., till '83 after 6p. c.	117	119	117	119
Illinois Central $100 shares.....	149⅛	150⅛	148	149
Do. S. F. 5s, 1903.....	105	107	105	107
Lehigh Valley Cons. mort. 1923...	115	120	115	120
Louisville and Nashville mort. 6s	94	96	94	96
Do. capital stock $100 shares...	57	58	58⅛	59⅛
N. Y. Cen. & Hud. R. mort. bonds.	130	135	130	135
Do. $100 shares.....	131	132	131	132
Do. mort. bonds (stg.).....	119	121	119	121
N. Y. Lake Erie & West. $100 shs.	40¼	40¾	41¼	41¾
Do. 6 p. c, pref. $100 shares....	84	86	84	86
Do. 1st Con. Mort. bonds (Erie).	130	135	128	132
Do. do. Funded Coupon bonds.	125	130	125	130
Do. 2d Consol. Mort. bonds....	99	101	99	101
Do. do. Funded Coupon bonds.	97	99	97	99
N. Y., Pa. & Ohio 1st mort. bonds.	57¼	58¼	55¼	56¼
Do. Prior Lien bonds (sterling).	103	106	103	106
Pennsylvania $50 shares.....	62¼	63	61¾	62½
General Mortgage.....	121	123	121	123
Phil. & Erie Gen. mort. 6s, 1920...	114	116	114	116
Philadelphia & Reading $50 shs..	28½	29	29¼	29¾
General Consol Mortgage.	115	117	115	117
Do. Improvement Mortgage....	104	106	104	106
Do. Gen. Mtg. '74, ex-def'd coup.	95	97	94	96
St. L. Bridge 1st mort. gold bond.	122	124	122	124
Do. 1st. pref. stock.....	92	96	92	96
S. P'fic of Cal., 1st mort 6s, 1905-6.	107	108	107	108
Union Pacific 1st mtg. 6s, 1896-9..	116	118	116	118
Wabash, St. L. & P. $100 shares..	34	35	36	37
Do. $100 pref shares...	56	57	57⅛	58⅛
Do. gen. mort. bonds.....	82	84	82	84

AMERICAN RAILROAD JOURNAL.

Financial and Commercial Review.

WEDNESDAY EVENING, FEBRUARY 14, 1883.

CALL loans on stock collaterals during the forenoon were 3½ per cent, and on Government bonds 2 to 3 per cent. After 2 o'clock the rate for money on call on stocks was 3 per cent.

The posted rates for foreign exchange were 4.83½ and 4.87. The actual rates were as follows: Sixty days, 4.82¾@4.83; demand, 4.85¾@4.86½; cables, 4.86½@4.86¾. Commercial bills were 4.81¾@4.82. Continental bills were as follows, viz: Francs, 5.21⅞@5.21¼, and 5.18¾@5.18½; reichsmarks, 94⅝@94¾ and 95⅛@95¼; guilders, 39⅞ and 40⅛.

The gross earnings of the Philadelphia and Erie Railroad for the year 1882 were $4,011,413, the operating expenses $2,599,534, and the net earnings $1,411,879, which together with receipts from rents, makes a total revenue of $1,415,465, against $1,029,083 for 1881, showing an increase of $386,382. After deducting fixed charges, drawbacks and taxes, the surplus of earnings for the year was $97,699. The extraordinary operating expenses of 1881 were $135,278, and in 1882 there were none, so that the total income for 1882 shows an increase of $521,660 over 1881. The cost of operating the road in 1882 was 64.80 per cent, a decrease of 5.10 per cent compared with 1881. The increase in passenger traffic during the year was 35 per cent and in freight 302,297 tons.

In the suit brought in the Supreme Court to restrain the Rome, Watertown and Ogdensburg Railroad Company from paying a dividend of three per cent upon its income bonds, Judge Donahue rendered a decision on the 12th inst. denying the motion to continue the preliminary injunction. These bonds, which were issued in extinguishment of certain liabilities of the company, were to draw interest from July 1, 1882, the interest to be computed from the end of each fiscal year and to be payable January 1 thereafter. The directors declared a dividend in December last, payable on January 20, 1883. The injunction was asked upon the ground that the dividend had not been earned in the fiscal year that closed last October, and that such interest should not be paid out of the earnings of the current fiscal year. The motion to continue the injunction was denied because the directors disproved the plaintiff's statement.

At an adjourned meeting in Philadelphia on the 8th inst. of the stockholders of the Buffalo, Pittsburgh and Western Railroad Company a resolution was adopted approving the consolidation of the Buffalo, Pittsburgh and Western, the Oil City and Chicago and Olean and Salamanca roads with the Buffalo, New York and Philadelphia Company, The agreement had already been favorably acted upon by the other companies in interest, as noted in our last issue, but the Buffalo, Pittsburgh and Western people were compelled to await the arrival of the proxies of the Dutch shareholders. The joint road will be known as the Buffalo, New York and Philadelphia Railroad Company. The company will have general offices in Philadelphia and New York, and Mr. J. W. Jones, formerly president of the Buffalo, Pittsburgh and Western, will be its president.

According to the statement of the Chief of the Bureau of Statistics at Washington the excess of exports of merchandise for the month of December, 1882, was $33,458,613, against $19,724,040 for the month of December, 1881; for the six months ending December 31, 1882, $54,572,222, against $65,339,712 for the same time in 1881; and for the twelve months ending December 31, 1882, $15,135,192 against $163,339,679 in 1881. The excess of imports or of exports of gold and silver coin and bullion was as follows: December, 1882 (excess of imports), $1,280,368; December, 1881 (excess of imports), $2,116,282; six months ended December 31, 1882 (excess of exports), $75,338; last year, 1881 (excess of imports), $26,516,794; twelve months ended December 31, 1882 (excess of exports), $33,537,221; last year, 1881 (excess of imports), $49,327,448; values of imports of merchandise during the twelve months ended December 31, 1882, $752,841,145, and for the same time in 1881, $670,209,448; value of exports of domestic and foreign merchandise during the twelve months ended December 31, 1882, $767,976,337, and for the twelve months ended December 31, 1881, $833,549,127.

The report of the master under the receivership of the Philadelphia and Reading Railroad and Coal and Iron Companies, filed in the Clerk's office of the U. S. District Court, Philadelphia, on the 8th inst., shows that the balance on hand in the treasury of the railroad company December 1, 1882, was $618,689; the receipts during the month of December were $4,210,423, and the balance on hand December 30 was $431,819. The balance on hand on account of deferred income bonds January 2, 1883, was $13,524, there having been transferred to the Board of Managers of the railroad company during the month of December cash amounting to $372. The balance in the treasury of the Coal and Iron Company January 1 was $5,685. The receipts during the month of December were $1,310,281 and the balance at the beginning of that month was $90,959.

There was recorded in the Circuit Clerk's office of Alexander County, Ill., on the 31st ult., a mortgage to secure bonds to the amount of $2,500,000. The mortgage was dated July 1, 1882, and was given by the Toledo, Texas and Rio Grande Railroad Company, to J. W. Paramore and John C. Black, trustees, to secure bonds issued by them for the construction of the road. Much of this road is already completed, and the rest of it will be pushed through with all the energy possible. It will embrace the Toledo, Cincinnati and St. Louis, the St. Louis and Cairo, and the Texas and St. Louis Narrow Gauge railroads. The Toledo and Cincinnati Railroad will cross the Illinois Central Railroad at Carbondale, and connect with the St. Louis and Cairo at Murphysboro, and the Texas and St. Louis at Cairo. This road will connect also with the Colorado Narrow Gauge Railroad, which extends far into Mexico.

The directors of the North Carolina Railroad Company have declared a dividend of six per cent—of which three per cent is payable March 1, and three per cent September 1.

The Governor of Rhode Island reports that the outstanding bonded indebtedness of that State is $1,606,500, with a sinking fund of $222,685.48, and an income during the latest calendar year of $888,419.34.

The Chancellor of New Jersey has rendered a decision making perpetual the injunction previously obtained restraining the stockholders of the Camden and Atlantic Railroad from postponing their annual election from Feb. 22 to a later date.

The gross earnings of the Pennsylvania Railroad Company for the year 1882, on the lines between New York and Pittsburgh and the lakes, amounted to $49,079,826 against $44,124,182 in 1881, and $41,260,072 in 1880. The monthly average of earnings for 1882 was $4,089,985, or over $140,000 per day, the largest for any period in the history of the road. Operating expenses were $36,647,397 in 1882, $26,709,809 in 1881 and $24,625,047 in 1880.

The Chicago *Tribune* says that the Cincinnati, Indianapolis, St. Louis and Chicago and the Chesapeake and Ohio have opened an office in hat city and announce that they are now pre-

pared to receive and bill freight via the Chesapeake and Ohio to Newport News and Europe, and that the rates to Newport News will be the same as to New York. The new route is but little longer than via the New York trunk lines, and in many respects has the advantage over the latter. It runs through a country that is almost entirely free from snow during the winter months, and will, therefore, be able to carry on its business when the other routes are blockaded. Besides, it will not find it necessary to charge heavy lighterage and terminal charges, the road running right to the steamers, which are owned and controlled by this company, which will be a saving to shippers of about three cents per bushel, even if it does maintain the same rates to Newport News as the trunk lines charge to New York. The Chesapeake and Ohio has now in the course of construction in England several first-class steamers, which will do its ocean business, and for their accommodation expensive and commodious docks have been built at Newport News.

The following quotations of sales of railway and other securities, for the week, are in addition to those given elsewhere in our columns.

New York.—Atchison, Colorado and Pacific, 90; Atlantic and Pacific 1st, 94; Boston and New York Air Line pref., 81¼; Col., Chi. and Ind. Cent., reorganization certif., 61; Clev., Col., Cin. and Ind. consol., 122⅝; Columbus, Hocking Valley and Toledo 1st, 84¾; Chicago, St. Paul, Minn. and Omaha, 46; do. pref., 103; do. consol., 106¾; Chesapeake and Ohio cur. 6s, 52¼; do. 1st, Series A, 107½; do. 6s, 1911, 101; Central Iowa 1st, 108; Chicago, Burlington and Quincy, Denver div. 4s, 82¾; Chicago, Milwaukee and St. Paul, 2d mort., 103½; do. La C. and Dav. div. 1st, 94½; do. Southern div., 108; do. Chicago and Pacific Western div. 1st, 92½; do. Southern Minn. div. 1st, 106⅝; Chicago, St. Louis and New Orleans 5s, 104¾; Cleveland and Toledo, S. F., 105½; Chicago and Northwestern, S. F. 5s, 101¾; Chicago and Milwaukee 1st, 119; Denver and Rio Grande, 43¾; do. 1st, 108; do. 1st consol., 88¾; Delaware and Hudson 1st, Penn. div., 126¼; Denver, South Park and Pacific 1st, 99; East Tenn., Va. and Ga., 9; do. pref., 16; do. inc., 36½; do. 1st, 116; do. 5s, 72; Fort Worth and Denver, 31¼; Green Bay, Winona and St. Paul, 5; do. 1st, 77; do. 2d inc., 12¾; Gulf, Colorado and Santa Fe 1st, 111¾; Iowa Midland 8s, 129; International and Gt. Northern 1st, 105¾; do. coup. 6s, 85; Indiana, Bloomington and Western, 29¾; do. Eastern div. 6s, 92½; Joliet and Chicago, 138; Jefferson R. R. 1st, 105; Kansas Pacific 1st consol., 98⅞; do. 6s, 1896, 108½; do. 6s, Denver div. ass., 107¾; Keokuk and Des Moines 1st, 103; Long Island, 62; do. consol. 5s, 98; Lake Erie and Western, 28¾; do. 1st, 99; Louisville, New Albany and Chicago, 62; do. 1st, 103; Louisville and Nashville gen'l mort. 6s, 92¾; do. Nashville and Decatur 1st, 116; Marietta and Cincinnati 1st pref., 11; Michigan Southern S. F., 106½; Minneapolis and St. Louis, 26; do. pref., 60¾; do. S.W. Ext. 1st, 110¾; Missouri, Kansas and Texas, 30⅞; do. consol. 7s, 105½; do. 2d, 56; do. gen'l mort. 6s, 80; Missouri Pacific, 102¾; do. 3d, 110; Memphis and Charleston, 41½; Manhattan Beach, 17; Mobile and Ohio, 18; do. 1st mort., 107½; do. 2d deben., 51; Milwaukee, Lake Shore and Western pref., 45½; do. 1st, 98⅜; do. inc., 76; Milwaukee and Northern 1st, 93; New York, Chicago and St. Louis, 11; do. pref., 24¾; do. 1st, 96½; Nashville, Chattanooga and Louis, 59¾; do. 1st, 96½; Northern Pacific, 47¾; do. 1st, 103⅝; New Orleans Pacific 1st, 88¾; New York, Ontario and Western, 25¾; do. pref., 82¾; Norfolk and Western pref., 39¾; do. gen'l mort., 101½; Ohio Southern 1st, 82¾; Ohio and Mississippi, Springfield div. 1st, 117; Ohio Central, 11¾; do. inc., 28; do. 1st, 92; Oregon Transcontinental, 84; do. 1st, 93¾; Oregon Railway and Nav., 135; do. 1st, 107; Oregon Short Line 6s, 94½; Peoria, Decatur and Evansville, 22¾; do. 1st, 100; Penn. Co. 4½s, 95; Rochester and Pittsburgh, 19⅝; do. 1st, 104; do. inc., 44¾; Richmond and Alleghany, 12; do. 1st, 79½; Richmond and Danville, 55¾; do. 6s, 93½; do. deben., 61½; Richmond, Danville and West Point, 25; Rensselaer and Saratoga, 142; Rome, Watertown and Ogdensburg 5s, ext., 73; St. Louis and San Francisco 2d, class A, 97; St. Paul, Minn. and Man., 140; do. 1st, 109; do. Dakota Ext. 1st, 108¾; St. Paul and Duluth, 39¾; do. pref., 93; St. Louis and Iron Mt. 1st pref. inc., 118; do. 5s, 77; South Carolina inc., 45; do. 1st, 102¼; do. 2d, 92; Southern Pacific of Cal. 1st, 104; South Pacific of Mo. 1st, 103¼; St. Louis, Alton and Terre Haute div. bonds, 75; St. Paul and Sioux City 1st, 112½; St. Louis, Kansas City and Northern, Omaha div. 1st, 109; do. R.E. 7s, 109; Texas Central 1st, 105⅛; Texas and Pacific, 39¾; do. inc. L. G., 58¾; do. Rio Grande div. 1st, 81⅛; Utah Southern Ext. 1st, 101⅜; Union Pacific col. trust, 102; Wabash, St. Louis and Pacific, gen'l mort. 6s, 78¾; do. Cairo div. 1st, 81; do. Toledo, Peoria and Western 1st, 107; do. Chicago div. 1st, 81½; Arkansas 7s, M. & L. R., 51; do. M., O. & R. R., 45; do. P. B. & N. O., 50; do. Central R. R., 20; Alabama, Class A, 82¼; do. B, 102½; Louisiana consol., 73; Missouri 6s, 1887, 107½; do. 1888, 109¾; Tennessee 6s, old, 43⅞; do. compromise bonds, 46; American Cable, 69; Gold and Stock Tel., 96½; Mutual Union Tel., 22½; do. 6s, 88; Colorado Coal and Iron, 33; do. 6s, 80½; New Central coal, 14; Homestake Mining, 17; Ontario Mining, 20.

Boston.—Atchison, Colorado and Pacific 6s, 90; Atlantic and Pacific 6s, 93; Atchison, Topeka and Santa Fe mort. 4s, 81; do. 1st guar., 111; Burlington and Missouri River in Nebraska 6s, non-exempt., 103¾; Boston, Revere Beach and Lynn, 115¾; Chicago, Burlington and Quincy 7s, 127; do. 4s, 85⅞; do. 4s, Denver ext. 82¾; Connotton Valley, 3⅜; do. 6s, 33⅛; do. 5s, 31; Cedar Rapids and Missouri River, 104; Chicago, Milwaukee and St. Paul, Dubuque div. 6s, 102¾; Cincinnati, Sandusky and Cleveland 7s, 104; Cheshire pref., 6c; Flint and Pere Marquette, 26; do. pref., 99; Iowa Falls and Sioux City, 88; Kansas City, Lawrence and Southern 5s, 104½; Kansas City, St. Joseph and Council Bluffs, 7s, 114; Kansas City, Ft. Scott and Gulf, 8o; do. pref., 120; do. 7s, 112; Little Rock and Ft. Smith, 7s, 94; Louisiana and Missouri River, 13; Marquette, Houghton and Ontonagon, 64½; do. pref. 114; Mexican Central, 21¾; do. 7s, 73; do. inc., 22¾; Massachusetts Central 6s, 21; New Mexico and Southern Pacific 7s, 113; New York and New England 6s, 114¾; Oregon Short Line 6s, 95; Portsmouth, Gt. Falls and Conway, 34; do. 4½s, 84; Rutland pref., 17; Southern Kansas and Western 7s, 109¾; Sonora 7s, 104½; Summit Branch, 7½; South Boston Street R. R., 70; Toledo, Cincinnati and St. Louis, 4¾; do. 6s, 45; do. inc., 13½; Toledo, Delphos and Burlington Branch inc., 12½; do. 6s, S. E. div., 48; Wisconsin Central, 18¾; do. pref., 30; do. 7s, 2d series, 49; Allouez Mining Co., 2½; Atlantic, 14; Franklin, 12¾; Huron, 1¾; Harshaw, 1; National, 1½; Napa Consol. Quicksilver, 3½; Osceola, 31; Pewabic, 8; Silver Islet, 6.

Philadelphia.—Am. Steamship Co. 6s, 106; Central Transp., 34; Camden and Atlantic 7s, 119; Easton and Amboy 5s, 107; Elmira and Williamsport 7s, 115½; Nesquehoning, 54; Northern Central 5s, series A, 99⅞; do. B, 95¾; Norfolk and Western pref., 39½; Philadelphia City 6s, 1899, 133; do. 6s, 1903, 134; do. 4s, 1893, 108½; Philadelphia and Reading R. R. consol. mort., 5s, 1st series, 85; do. second series, 68; do. income 7s, 94; do. adj. scrip, 87½; do. gen'l mort. 7s, 101¼; do. deben. 6s, 76; do. scrip, 105; Pennsylvania Car Trust 5s, 1890, 100; Philadelphia, Wilmington and Baltimore 4s, 93¾; Pennsylvania Co. 4½s, 95; do. 6s, 108; Philadelphia, Germantown and Norristown, 107¼; Philadelphia and Reading Coal and Iron deben. 7s, 77; Perkiomen 6s, 103; Shamokin Valley and Pottsville 7s, 123; Susq. Canal 6s, 71⅜; Schuylkill Nav. B. L., 70; Texas and Pacific 1st mort., 6s, 106; do. consol. mort. 6s, 94¾; West Chester and Philadelphia 7s, 119; West Jersey and Atlantic, 32; do. 6s, 110¾ The latest quotations are: Pennsylvania State 5s, new loan, 113⅛@117⅛; do. 4s, old, 110@112; do. 4s, new, 116⅛@117⅛; Philadelphia and Reading Railroad, 27@27⅛; do. consol. mort. 7s, reg., 125@126; do. gen'l mort. 6s, coupon, 94⅛@95¼; do. 7s, 1893, 119@121; do. 7s, new conv., 75⅛@76; do. gen'l mort. 7s, 101@101½; do. consol. mort. 5s, 1st series, —@85; do. 2d series, 67@69; United New Jersey R. R. and Canal, 189½@—; Buffalo, Pittsburgh and Western, 16⅛@16¾; Pittsburgh, Titusville and Buffalo 7s, 94@94¼; Camden and Amboy mort. 6s, 1889, 112@113; Pennsylvania R. R., 59½@59¾; do. general mort. 6s, coupon, 123@124; do. reg., 125@126; do. consol. mort. 6s, reg., 119¼@120¾; Little Schuylkill R. R., 58@59; Schuylkill Navigation pref., 14@15; do. 6s, 1882, 89@90; Elmira and Williamsport pref., 58@60; do. 5s, 99@100; Lehigh Coal and Navigation, 38¾@39; do. 6s, 1884, 102½@103; do. R. R loan, 116@117; do. Gold Loan, 111@112; do. consol. 7s, reg., 117¾@118; North Pennsylvania, 66¼@67; do. 6s, 103@104; do. 7s, 119@—; do. 7s, General mort. reg., —@125; Philadelphia and Erie, 20¾; do. 7s, 112@113; do. 5s, 104¼@105¾; Minehill 62¼@63¼; Catawissa, 22@24; do pref., 56¾@57¼; do. new pref., 54@55; do. 7s, 1900, 119@121; Lehigh Valley, 64¾@64⅞; do. 6s, coupon, 121@122; do. reg., 121¾@122; do. 7s, reg., 133@135; do. consol. mort. reg., 122@124; Fifth and Sixth streets (horse), 190@200; Second and Third, 113@117; Thirteenth and Fifteenth, 76@78; Spruce and Pine, 42½@48; Green and Coates, 75@80; Chestnut and Walnut, 89@91; Germantown, 65@70; Union, 110@—; West Philadelphia, 135@—; People's, 7¼@7¾; Continental, 100@103.

Baltimore.—Atlanta and Charlotte, 63; do. 1st, 106½; Atlantic coal, 0.90; Baltimore and Ohio 1st pref., 130; Baltimore City 6s, 1890, 113¼; do. 5s, 1894, 113¼; do. 5s, 1916, 122½; do. 5s, 1900, 116; do. 4s, 1920, 109¾; Columbia and Greenville 1st, 1916, 101¼; do. 2d, 73½; Charlotte, Columbia and Augusta, 31; George's Creek Coal, 92½; Maryland Defense, 102¾; Norfolk Water 8s, 132; Northern Central 5s, series A, 100; do. B, 95¾; Ohio and Mississippi, Springfield div. 1st, 116; Richmond and Danville gold 6s, 93¼; Union R. R. 6s, 117½; Virginia Midland 1st mort., 114; do. 2d mort., 110; do. 3d mort., 96; do. 4th mort., 52; do. 5th mort., 97¼; do. inc., 58; Virginia and Tennessee 8s, 125; Virginia Peelers, 34⅞; do. peeler coupons, 38½; do. 10-40 coupons, 48½; Wilmington, Columbia and Augusta, 110. The latest quotations are: Atlanta and Charlotte 1st, 106¾@106¾; Baltimore and Ohio, 200@202; do. 6s, 1885, 105@—; Baltimore City 6s, 1884, 101½@—; do. 6s, 1886, 106¼@—; do. 6s, 1890, 113¼@113¾; do. 6s, 1900, 125@—; do. 6s, 1902, 126@—; do. 5s, 1894, 113½@114; do. 5s, 1916, 122½@—; Canton 6s, gold, 108@110; Marietta and Cincinnati 7s, 1891, 132@132½; do. 7s, 1896, 103¾@104½; do. 8s, 1890, 55@55¼; Northern Central, 55@55¼; do. 6s, 1885, 103¾@103¾; do. 6s, 1900 gold, 114½@115; do. 6s, 1904, gold, 113½; do. 5s, Series A, 100@101; Ohio and Mississippi, Springfield div. 1st, 116½@116¾; Richmond and Danville 6s, gold, 93⅝@94; Virginia and Tennessee 8s, 1900, 124⅞@125¼; Virginia Midland 5th mort., 97@98; do. inc., 58@60; Virginia consol., 50@50¾; do. 10-40s, 40⅜@40½; do. 3s, 49@50; Western Maryland 6s, end. by Washington county, 111¾@112½.

A One-Rail Elevated Railroad.

An exhibition of the practical workings of the trains of the Bicycle Elevated Railroad and Construction Company was had at the workshops of the company at East New York on the 8th inst. The inventor, Mr. Norman Allen, is reported to have said that the running of cars on one track is not at all dangerous, as there is a small wheel on the top of the side of the cars also running on a track, which renders it next to impossible for the train to be derailed. Mr. W. T. B. Milliken, the attorney for the patentee, felt confident that in a very short time the one-track elevated trains would supplant those now in use, as more light is given to the houses on the line and the cost of equipping and running is much less. The trials are said to have been quite satisfactory, although the trains did not go two miles a minute, as the inventor claims they can. Persons desirous of establishing a one-track elevated railroad are invited to communicate with Mr. Allen.

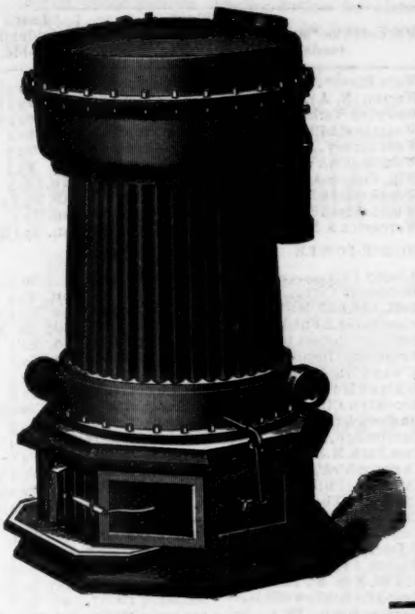
ILLINOIS CENTRAL RAILROAD COMPANY.
FORTY-FIRST SEMI-ANNUAL CASH DIVIDEND.

The Board of Directors have declared a dividend of THREE AND ONE-HALF per cent in cash, payable March 1, 1883, to the shareholders of the ILLINOIS CENTRAL RAILROAD COMPANY as registered at the close of business on Feb. 10. They have also declared an extra dividend of ONE-HALF OF ONE per cent in cash, payable at the same time to said shareholders, out of the earnings of the SOUTHERN DIVISION for the six months ending Dec. 31, 1882. The stock transfer-books will be closed from and after Feb. 10, until the morning of March 5.

L. V. F. RANDOLPH, Treasurer.

NEW YORK, Jan. 18, 1883.

THE SALMON CAR HEATER



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It Insures Safety from Fire in case of Accident, Economy in Fuel and RAPID CIRCULATION. It heats quickly, is SELF-REGULATING, and can be used for either STEAM OR HOT WATER.

The Water Tubes do not come in contact with the Coals, but occupy the Smoke Flue in such a manner as to absorb the greatest amount of heat from Coal in a **low State of combustion** without danger of chilling the fire.

At the last "Mechanics' Fair" it received the Silver Medal, being the highest award to heaters of any kind.

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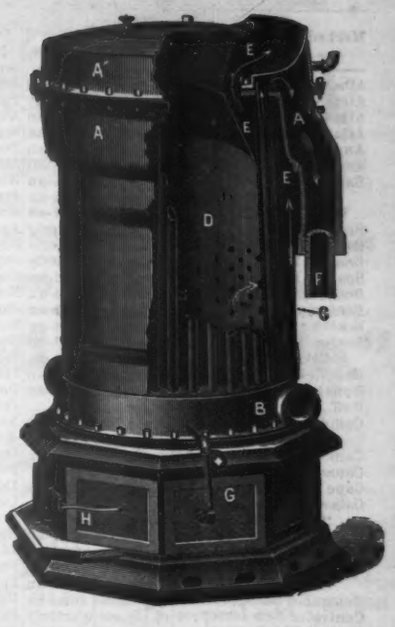

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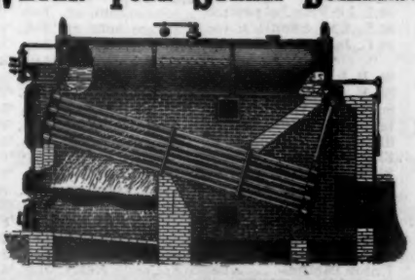

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RAILROAD AND CANAL DIVIDEND STATEMENT.

Showing the amount of Stock Outstanding, the Dividend Periods and the date of last Dividend.

Marked thus(*)are leased roads.	Stock out-standing.	Divide'd Periods.	Last Dividend Payable.
Albany and Susq*...100	2,500,000	semi-an	Jan. '83 2
Atch., Top. and S. Fe100	54,000,000	q'arterly	Feb. '83 1½
Atlanta and W. Point100	1,232 200	semi-an	Aug. '82 6
Atlantic and St. Law*100	5,840,000	semi-an	Sept. '82 3
Augusta and Savan'h100	1,022,900	semi-an	Dec. '82 3½
Avon, Geneseo&MtM*100	225,000	semi-an	Jan. '82 3
Baltimore and Ohio.100	14,792,566	semi-an	Nov. '82 5
" " pref.100	5,000,000	semi-an	Jan. '83 3
Washington Br....100	1,650,000	semi-an	Nov. '82 5
Berkshire*.....100	600,000	q'arterly	Apl. '82 1¾
Boston and Albany..100	20,000,000	q'arterly	Dec. '82 2
Bos.&N.Y.AirLine pf.100	2,795,227	q'arterly	June'82 1
Bos.,Cl.,F.&N.B.pref.100	1,750,100	semi-an	Oct. '82 3½
Bos.,Conc.&Mont.pf*100	800,000	semi-an	Nov. '82 3
Boston and Lowell..500	3,940,000	semi-an	Jan. '83 2½
Boston and Maine...100	6,921,274	semi-an	Nov. '82 4
Boston & Providence100	4,000,000	semi-an	Nov. '82 4
Attleborough Br...100	131,700	semi-an	Jan. '83 3½
Bos.,Revere B &Lynn100	419,400	semi-an	Jan. '83 3
Buffalo,N. Y. & Erie*.100	950,000	semi-an	Dec. '82 3
Buff.,Pitts. & West.pf. 50	1,457,000	.....	Jan. '83 3
Camden & Atlantic.. 50	377,400	q'arterly	Nov. '82 3
" " pref. 50	880,650	q'arterly	Nov. '82 4
Camden & Burl. Co..100	381,925	semi-an	Jan. '83 3
Canada Southern....100	15,000,000	.....	Feb. '81 2½
Cape May &Millville* 50	447,000	semi-an	Dec. '82 3
Catawissa*..... 50	1,159,500	annual	Oct.'82$2½
" pref..... 20	2,200,000	semi-an	Nov. '82 3½
" new pref.. 50	1,000,000	semi-an	Nov. '82 3½
Cayuga and Susq.*.. 50	589,110	semi-an	Jan. '83 4½
Cedar Rapids&Mo.R*100	6,850,400	q'arterly	Feb. '83 1½
" " pref.100	769,600	semi-an	Feb. '83 3½
Central of Georgia...100	7,500,000	semi-an	Dec. '82 4
Central of New Jersey100	18,563,200	q'arterly	July '76 2½
Central Ohio*..... 50	2,437,950	semi-an	Jan. '83 3
" pref.. 50	411,550	semi-an	Jan. '83 3
Central Pacific 100	59,275,500	semi-an	Feb. '83 3
Cheshire preferred ..100	2,155,300	semi-an	Jan. '83 1½
Chicago and Alton...100	11,181,741	semi-an	Mar. '83 4
" " pref 100	2,245,400	semi-an	Mar. '83 4
Chi., Burl. & Quincy.100	69,508,105	q'arterly	Mar. '83 2
Chi., Iowa & Nebras*.100	3,916,200	semi-an	Jan. '83 4
Chi., Mil. & St. Paul.100	20,404,261	semi-an	Oct. '82 3½
" " pref 100	14,401,483	semi-an	Oct. '82 3½
Chi. & N. Western...100	14,988,257	semi-an	Dec. '82 3½
" pref.100	21,525,353	q'arterly	Dec. '82 2
Chi., R. I. & Pacific..100	41,960,000	q'arterly	Feb. '83 1¾
Chi. and West Mich .100	6,151,000	semi-an	Feb. '83 3
Chi.,St.P.,M.&O.pref.100	10,390,000	q'arterly	Jan. '83 1¾
Cin.,Ham.&Dayton ...100	3,500,000	semi-an	Jan. '83 3
C., Ind., St. L. & Chi..100	6,000,000	q'arterly	Jan. '83 1½
Cin., Sand. & Clev.pf. 50	429,037	semi-an	Nov. '82 3
Clev.,Col.,Cin. & Ind.100	14,991,800	.....	Feb. '83 2
Clev. and Pittsburg* 50	11,244,336	q'arterly	Mar. '83 1¾
Columbus & Xenia*. 50	1,786,200	q'arterly	Dec. '82 2
Col.,Hock.Val.&Tol..100	10,316,500	.....	Jan. '83 2½
Concord 50	1,500,000	semi-an	Nov. '82 5
Concord and Ports.*.100	350,000	semi-an	Jan. '83 3½
Conn.& Passump.Riv100	2,244,400	semi	Feb. '83 3
Connecticut River ..100	2,100,000	semi-an	Jan. '83 4
Cumberland Valley.. 50	1,292,950	q'arterly	Jan. '83 2½
" 1st pref 50	241,900	semi-an	Oct. '82 4
" 2d pref. 50	243,000	semi-an	Oct. '82 4
Danbury & Norwalk. 50	600,000	.....	Oct. '82 2½
Dayton and Mich.*.. 50	2,402,573	semi-an	Oct. '82 1¾
" " pref. 50	1,211,250	q'arterly	Jan. '83 2
Delaware*..... 25	1,468,940	semi-an	Jan. '83 3
Del. & Bound Brook*100	1,652,000	q'arterly	Feb. '83 1¾
Del., Lack.& Western 50	26,200,000	q'arterly	Jan. '83 2
Denver & Rio Grande.100	29,160,000	q'arterly	Jan. '82 1½
Detroit, Lans. & Nor.100	1,825,600	semi-an	Feb. '83 3
" " pref.100	2,503,380	semi-an	Feb. '83 3½
Dubuque&Sioux C'y*100	5,000,000	semi-an	Oct. '82 3
East Pennsylvania*.. 50	1,709.550	semi-an	Jan. '83 3
East Mahanoy*..... 50	392,950	semi-an	Jan. '83 3
Eastern (N. H.).....100	492,500	semi-an	Dec. '82 2½
Eel River.....100	3,000,000	q'arterly	Dec. '82 $1
Elmira&Williamsp't* 50	500,000	semi-an	Nov. '82 1½
" " pref. 50	500,000	semi-an	Jan. '83 3½
Erie and Pitsburg*.. 50	1,998,400	q'arterly	Dec. '82 1¾
Evansville & Terre H.100	100,000	semi-an	Jan. '83 6b
Fitchburg..... ..100	4,500,000	semi-an	Jan. '83 3
F. & P. Marquette pf.100	6,500,000	semi-an	Jan. '83 3½
Ft.Wayne & Jack. pf..100	2,000,000	.....	May '82 2
Georgia. ..... .100	4,200,000	q'arterly	Jan. '83 2½
Granite 100	1,250,000	semi-an	Jan. '83 3
Green w'h&Johnsonv.100	118,000	semi-an	Jan. '83 4
Han. & St. Jo. pref .100	5,083,024	semi-an	Feb. '83 3
Harrisbg&Lancaster 50	1,182,500	semi-an	Jan. '83 3½
H'ford &Conn. West'n 100	.....	.....	Nov. '82 1½
Housatonic pref. ...100	1,180,000	q'arterly	Jan. '83 2
Illinois Central.....100	39,000,000	semi-an	Mar. '83 4
Ia.Falls & Sioux City*100	4,623,500	q'arterly	Dec. '82 1¾
Iowa R.R.& Land Co.100	7,620,000	q'arterly	Feb. '83 1
Jeffersonv. Mad.&Ind100	2,000,000	q'arterly	May '82 1¾
Joliet and Chicago*...100	1,500,000	q'arterly	June'82 1¾
Kan. C.,Ft.S.&Gulf...100	4,000,000	.....	Feb. '83 3
" " pref..100	2,750,000	semi-an	Feb. '83 4
Kentucky Central....100	500,000	semi-an	June'81 1
" " pre f..100	5,583,500	semi-an	June'81 1
Lake Shore &Mich.So.100	49,466,500	q'arterly	Feb. '83 2
" " (guar.)100	533,500	semi-an.	Feb. '83 5
Lawrence*..... 50	450,000	q'arterly	Jan. '83 2
Lehigh Valley..... 50	27,496,895	q'arterly	Jan. '83 2
" pref. 50	106,300	q'arterly	Jan. '83 2

Marked thus(*)are leased roads.	Stock out-standing.	Divide'd Periods.	Last Dividend Payable.
Little Miami..... 50	4,637)300	q'arterly	Dec. '82 2
Little Rock & Ft. S..100	4,096,135	.....	July' 81 108
Little Schuylkill*.. . 50	2,646,100	semi-an.	Jan. '83 3½
Long Island..... 50	10,000,000	q'arterly	Feb. '83 1
Louisville & Nashv...100	25,000,000	semi-an.	Feb. '82 3
Lowell & Andover...100	500,000	semi-an.	Jan. '83 3½
Lykens Valley 100	600,000	q'rterly.	Jan.' 82 2½
Maine Central.....100	3,603,300	semi-an.	Feb. '83 2½
Manchester & Law.. 00	1,000,000	semi-an.	Nov. '82 5
Manhattan 100	13,000,000	.....	.....
" " 1st pref.100	6,500,000	q'rterly.	Jan. '83 1½
" " 2d pref.100	6,500,000	q'rterly.	Jan. '83 1½
Marq.Hout.& Ont....100	2,306,600	.....	Feb. '83 4
" " pref...100	2,259 026	semi-an.	Feb. '83 4
Massawippi*..... 100	400,000	semi-an	Feb. '83 3
Metropolitan 100	6,500,000	q'rterly	Oct. '82 1½
Michigan Central....100	18,738,204	.....	Feb. '83 2
Middlesex Central....100	280,000	semi-an.	Feb. '83 3
Mill Creek&Minehill* 50	323,000	semi-an.	Jan. '83 5
M.Hill& Schuyl.Hav* 50	4,022,500	semi-an.	Jan. '83 3½
Missouri Pacific.....100	28,169,800	q'rterly.	Jan. '83 1¾
Mobile&Montgomery100	3,022,517	semi-an.	Feb. '80 2½
Morris and Essex.... 50	15,000,000	semi-an.	Jan. '83 3½
Mt Carbon&PtCarbon 50	282,350	semi-an.	Jan. '83 6
Nashua and Lowell..100	800,000	semi-an.	Nov. '82 4
Nashua & Rochester.100	1,305,800	semi-an.	Oct. '82 1½
Nashv. & Decatur...100	1,827,000	semi-an.	June'82 3
Nash.,Chat.&StLouis 25	6,670,325	semi-an.	Apl. '82 1½
Naugatuck.....100	2,000,000	semi-an.	Jan. '83 5
Nesquehoning Val'y* 50	1,300,000	semi-an.	Sept.'82 3
N.Castle&Beaver Val* 50	600,000	q'rterly.	Oct. '82 —
NewLondonNorth'n*100	1,500,000	q'rterly.	Jan. '83 1½
N. Y. Cen. & Hud. R.100	89,428,330	q'rterly.	Jan. '83 2
N. Y. and Harlem....100	7,950,000	q'rterly.	Jan. '83 4
" " pref.100	1,500,000	q'rterly.	Jan. '83 4
" City Line.. —	.....	annual	Apl. '82 3
N. Y., Lack. & West...100	10,000,000	q'rterly.	Jan. '83 1¾
N.Y.,LakeErie&West.100	77,087,600	.....	.....
" " pref.100	7,987,500	annual..	Jan. '83 6
N. Y., N. H. & Hart...100	15,500,000	semi-an.	Jan. '83 5
N. Y., Prov. & Boston100	3,000,000	q'rterly.	Feb. '83 2
Niag.Bridg&Canand*100	1,000,000	semi-an.	Oct. '82 3
North Carolina*.....100	3,000,000	semi-an.	Mar. '83 3
" " pref.100	1,000,000	semi-an.	Mar. '83 3
Norfolk & Western pref.	15,000,000	q'rterly.	Dec. '82 $1
North Pennsylvania. 50	4,527,150	q'rterly.	Feb. '83 1¾
Northern Central.... 50	6,142,000	semi-an.	Jan. '83 4
Northern N. Hampsh100	3,068,400	semi-an.	Dec. '82 3
Northern Pacific pref100	41,909,132	.....	Jan. '83 11.1
Norwich&Worcester*100	2,604,400	semi-an.	Jan. '83 5
Oregon &Transcont'l.100	40,000,000	q'rterly.	Jan. '83 1½
Old Colony.....100	7,333,800	semi-an.	Jan '83 3½
Oregon R'way&Nav.100	18,000,000	q'rterly.	Feb. '83 2½
Oswego & Syracuse..100	1,320,400	semi-an.	Feb. '83 4½
Panama..... 100	7,000,000	semi-an	Jan. '83 6½
Paterson & Hudson*.100	630,000	semi-an.	Jan. '83 4½
Paterson & Ramapo.100	248,000	semi-an.	July '82 4
Pember.&Hightst'n*. :0	342,150	semi-an.	Jan. '83 3
Pennsylvania... ... 50	83,786,570	semi-an.	Nov. '82 4½
Pennsylvania Co. .. 50	20,000,000	annual	Dec. 82 4
Peoria & Bureau Val*100	1,200,000	semi-an.	Feb. '83 4
Philadelphia & Erie*. 50	7,013,700	semi-an.	.....
" " pfd 50	2,400,000	semi-an.	Jan. '75 4
Phil,Ger.&Norrist'n* 50	2,231,900	q'rterly.	Dec. '82 3
Phil. and Reading... 50	32,726,375	q'rterly.	Jan. '76 2½
" " pref. 50	1,551,800	q'rterly.	July '76 3½
Phila. and Trenton..100	1,259,100	q'rterly.	Jan. '83 2½
Phila., Wil. and Balt. 50	11,585,750	semi-an.	Jan. '83 4
Pittsb.,Ft. W. & Chi.*100	19,714,285	q'rterly.	Jan. '83 1¾
" Special Imp.100	6,770,900	q'rterly.	Jan. '83 1½
Pittsfield&N.Adams..100	450,000	semi-an.	Jan. '83 2½
Portl., Saco & Portsm100	1,500,000	semi-an.	Jan. '83 3
Providence &Worces.100	2,000,000	semi-an.	Jan. '83 3
Rensselaer&Saratog.*100	7,000,000	semi-an.	Jan. '83 4
Richmond& Danv...100	5,000,000	q'rterly.	Aug. '82 2
Richmond & Petersb100	1,009,300	semi-an.	Aug. '82 2
Roch.&Genesee Val.*100	555,200	semi-an.	Jan. '83 3
RomeWater.&Ogdens'rg100	5,293,900	.....	Jan. '83 3
Rutland preferred.. 100	4,000,000	semi-an.	Sept. '82 1
SpuytenDu'vil&PtM.100	989,000	semi-an.	Jan. '83 4
St.L.,Alt. & T.Haute.100	2,300,000	.....	.....
" " pref.100	2,468,406	.....	Dec. '82 4
St.L.&S.Fran.1st pref100	4,500,000	semi-an.	Feb. '83 3½
St.L.,I.Mt.&South'n.100	21,459,921	semi-an.	Feb. '74 3
St.L.,Jac'ville & Chic.100	1,293,000	.....	Aug. '82 4½
" " pref.100	1,034,000	.....	Aug. '82 4½
St. P. & Duluth pref.100	4,705,000	semi-an.	Jan. '83 3½
St. P., Minn. & Man..100	20,000,000	q'rterly.	Feb. '83 2
Schuylkill Valley*... 50	576,050	semi-an.	Jan. '83 2½
Seaboard & Roanoke.100	1,229,600	semi-an.	Nov. '82 5
Shamokin V.&Pottsv 50	669,450	semi-an.	Feb. '82 3
Shore Line*.....100	1,000,000	semi-an.	July '82 4
Sioux C.&Pacific pref100	169,000	semi-an.	Oct. '82 3½
South Br. (N. J.*....100	438,300	semi-an.	Jan. '82 3
South Western (Ga.)*100	3,892,300	semi-an.	Dec. '82 3½
Stockbridge&Pitts.*.100	448,700	q'rterly.	Jan. '83 1½
Syr.,Bingham&N.Y.*100	2,500,000	semi-an.	Aug. '82 2
Terre Haute & Ind...100	1,988,150	semi-an.	Feb. '83 4
Union Pacific. 100	60,854,105	q rterly.	Jan. '83 1¾
United Cos of N. J.*.100	20,490,000	q'rterly.	Jan. '83 2½
Utica, Shenango&S V100	4,000,000	semi-an.	Nov. '82 3
Utica and Black Riv.100	1,772,000	semi-an.	Sept '82 3
Vermont and Mass..100	3,050,000	semi-an.	Oct. '82 3
Vermont Valley.... 100	1,000,000	.....	Jan. '83 3
Wab. St.L.&Pac.pref.100	22,615,100	q'rterly.	Nov. '81 1½

Markedthus(*)are leased roads.	Stock out-standing.	Divide'd Periods.	Last Dividend Payable.
Ware River*.....100	750,000	semi-an.	Jan. '83 3½
Warren (N. J.).....100	1,800,000	semi-an.	Oct. '82 3½
Warwick Valley.....100	340,000	semi-an.	July '82 2½
Westchest&Phil.pref100	821,300	semi-an.	July '80 2
West Jersey.....100	1,359,750	semi-an.	Sept. '82 3
Wilmingt'n&Weld'n.100	1,456,200	semi-an.	Jan. '83 3
Wil., Col., & Aug 100	960,000	semi-an.	Jan. '83 3
Winchester&Poto'c.*100	180,000	semi-an.	Jan. '83 3
Winchester&Strasb.*100	74,700	semi-an.	Jan. '83 3
Worcester & Nashua. 75	1,789,800	semi-an.	Jan. '83 1½
HORSE-POWER R. R.			
Albany City.....100	200,000	annual	..... '80 5½
Baltimore City..... 25	1,000,000	semi-an.	Jan. '83 3
Balt.,Cat.&El. Mills..100	8c,ccc	semi-an.	Jan. '83 2½
BleeckerSt.&Ful.F'y.100	900,000	semi-an.	July '82 ¾
Boston&Chelsea pref. 50	110,000	semi-an.	Oct. '82 3
Broadway (Brooklyn)100	250,000	q'arterly	Oct. '82 6
B'way&7th Av,(N.Y.)100	2,100,000	q'arterly	Oct, '82 2
B'klyn&Hunter's Pt.100	400,000	semi-an.	Oct. '82 6
Brooklyn City.....100	2,000,000	q'arterly	Nov. '82 3½
Bushwick (Brooklyn)100	309,000	semi-an.	Oct. '82 6
Cambridge.....100	908,000	q'arterly	Oct. '82 4½
Cen.Park,N.& E.Riv.100	1,800,000	q'rterly.	Oct. '82 6
Christoph'r&TenthSt100	650,000	semi-an.	Aug. '82 2½
Citizens' (Phil.)..... 50	192,500	q'rterly.	Jan. '82 2½
Citizens' (Pbg.)..... 50	200,000	annual..	....'80 14½
Coney Island&Bklyn100	500,000	semi-an.	Oct. '80 5
Continental (Phil.) .. 50	580,000	semi-an.	Jan. '83 6
D.Dock,E.B'way&Bat100	1,200,000	q'arterly	Aug. '82 4
Eighth Av. (N. Y.)...100	1,000,000	q'rterly.	Oct. '82 3
42d St. & G. St. Ferry100	747,000	semi-an.	May '82 6
Frankf.&Southw (Ph) 50	600,000	q'rterly.	Oct. '82 6
Germantown, (Ph.).. 50	1,540,902	q'rterly.	Jan. '83 2½
Girard College (Ph.) . 50	500,000	semi-an.	July '71 3
Grand St. & Newton..100	170,091	semi-an.	July '81 2½
Green&Coates St.(Ph) 50	708,650	q'rterly.	Jan. '83 3
Heston,Mantau&F'm 50	299,381	semi-an.	Jan. '75 4
Highland.....100	600,000	semi-an.	Jan. '83 4
Lomb.&SouthSts(Ph) 25	195,000	semi-an.	Oct. '75 4
Lynn and Boston....100	200,000	semi-an.	Nov. '82 4
Malden and Melrose.100	165,000	.....	.....
Metropolitan (Bost.). 50	1,500,000	semi-an.	Jan. '83 4
Middlesex (Boston)..100	650,000	semi-an.	Nov. '82 3½
N.Y.,Bay Ridge&Jam100	150,000	.....	Oct. '78 7
Ninth Av. (N. Y.)....100	797,320	.....	.....
Orange &Newark....100	282,555	.....	.....
People's (Phila.) pref. 25	115,250	.....	July '82 2
Philadelphia City... 50	475,000	semi-an.	July '82 4
Phila. and Darby.... 20	200,000	semi-an.	July '81 3½
Phila.&Grey's Ferry. 50	308,000	semi-an.	Jan. '82 6
Pbg,Alleg.&Manches. 50	300,000	q'rterly.	Oct. '81 3
Ridge Avenue (Ph.).. 50	420,000	semi-an.	Oct. '81 11
Second Avenue (N.Y.)100	1,199,500	semi-an.	July '82 4
Second&ThirdSt.(Ph) 50	771,076	q'rterly.	Jan. '83 4
17th &19th sts (Ph.).. 50	250,000	semi-an.	July '81 3
Sixth Avenue (N. Y.)100	750,000	semi-an.	May '82 5
Somerville (Boston).100	113,000	semi-an.	Nov. '82 3
South Boston..... 50	600,000	semi-an.	Jan. '83 4
Third Avenue, N. Y..100	2,000,000	q'rterly.	Aug '82 5
13th and 15th sts.,Ph 50	334,529	q'rterly.	Jan. '83 4
23d street, N. Y.....100	600,000	semi-an.	Aug.'82 4
Union, Boston.....100	374,300	semi-an.	Jan. '82 4
Union, Phila..... 50	1,005,000	semi-an.	Jan. '83 2
West Philadelphia... 50	750,000	semi-an.	July '77 10
CANALS.			
Chesapeake and Dela 50	2,078,038	semi-an.	June'75 2
Delaware Division... 50	1,633,350	semi-an.	Feb. '83 2
Delawa. and Hudson100	20,000,000	q'rterly.	Dec. '82 1¾
Delaware & Raritan*.100	5,847,400	q'rterly.	Jan. '83 2½
Lehigh Coal and Nav 50	11,204,250	semi-an.	Dec. '82 2
Monongahela Nav... 50	1,004,500	semi-an.	Jan. '83$3
Morris, consolidated.100	1,025,000	semi-an.	Aug. '82 2
" preferred....100	1,175,000	semi-an.	Aug.'82 5
Pennsylvania..... 50	4,501,200	.....	.....
Schuyl. Nav., com.*. 50	859,100	annual..	Oct.'82 50c.
" " pref... 50	3,200,000	annual..	Oct. '82 $1
MISCELLANEOUS.			
Adams Express.....100	12,000,000	q'rterly.	Dec. '82 2
American Express... 50	18,000,000	semi-an.	Jan '83 3
Amoskeag Manuf.Co.100	3,000,000	semi-an.	June'81 5
Calumet&HeclaMin'g 25	100,000 S.	q'rterly.	Feb. '83 $5
Central Mining Co...100	.....	annual.	Feb. '83 $3
Consolidation Coal..100	10,250,000	semi-an.	Jan. '82 2
George's Creek C.&I.100	.....	semi-an.	Jan. '83 3
Maryland Coal.....100	4,400,000	semi-an.	Feb. '76 1½
Mariposa L. &Mining100	10,000,000	.....	.....
" pref100	5,000,000	.....	.....
Missouri Val.LandCo100	200,000	semi-an.	Jan. '83 $6
National Tube Works100	2,000,000	q'rterly.	Jan. '83 2
Pac. Mail Steamship.100	20,000,000	q'rterly.	Sept.'69 3
Pennsylvania Coal... 50	5,000,000	q'rterly.	Feb. '83 3
Pullman Palace Car..100	10,032,800	q'rterly.	Feb. '83 2
Quicksilver, com....100	5,708,700	.....	May '82 0.4
" pref....100	4,291,300	.....	May '82 6
Quincy Mining Co... 25	40,000 shs	semi-an.	Feb. '83 $6
Quincy R. R. Bridge. 100	1,750,000	semi-an.	Jan. '83 5
SiouxC.&I.F.L.&L.Co100	500,000	semi-an.	Dec. '82 3½
Spring Mt. Coal.....100	1,500,000	semi-an.	Dec. '82 3½
Topeka Eqaip'nt Co.100	255,500	semi-an.	Oct. '82 5
United States Ex....100	7,000,000	q'rterly	Feb. '83 1
Wells-Fargo & Co. Ex100	6,250,000	semi-an.	Jan. '83 4
Western Union Tel..100	80,000,000	q'rterly.	Jan. '83 1

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RAILROAD EARNINGS—MONTHLY.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Burl., Cedar Rap. & Northern:													
1880	184,316	165,170	188,395	141,652	149,504	153,378	143,432	160,160	179,804	204,991	189,330	193,419	2,053,484
1881	167,750	124,510	148,551	184,680	165,630	205,912	174,351	209,112	221,801	221,748	202,180	232,812	2,259,037
1882	252,823	225,631	224,107	178,304	199,278	211,257	198,476	224,921	261,439	300,155	278,439	246,062	2,800,679
Central Pacific:													
1880	1,200,615	1,070,487	1,373,438	1,356,716	1,778,488	1,724,930	1,840,067	1,973,438	1,994,997	1,120,229	2,199,466	1,905,221	20,508,113
1881	1,602,907	1,454,218	1,709,638	1,872,370	2,091,411	2,159,382	1,899,346	2,088,519	2,185,303	2,507,857	2,297,971	2,225,179	24,094,101
1882	1,839,469	1,720,673	1,969,737	2,054,687	2,342,298	2,229,105	2,076,648	2,350,557	2,495,445	2,424,549	2,242,000	1,968,000	25,713,150
Chesapeake and Ohio:													
1880	202,335	198,681	222,762	221,559	199,443	214,352	238,236	259,110	247,303	211,820	240,795	218,009	2,674,308
1881	162,540	184,389	228,479	227,343	252,235	241,135	225,096	262,858	247,144	236,306	230,022	203,562	2,702,762
1882	210,455	209,708	208,981	267,454	255,939	260,753	306,831	371,175	332,219	347,882	287,850	.....	.....
Chicago and Alton:													
1880	534,054	497 013	626,473	542,961	616,198	617,524	708,906	761,120	767,349	785,199	696,776	574,695	7,718,198
1881	487,890	461,641	529,915	558,190	548,556	635,860	676,205	769,751	774,790	771,844	672,380	646,812	7,557,741
1882	579,447	530,480	584,483	561,787	553,412	613,886	671,537	800,624	881,109	812,032	748,151	699,323	8,211,988
Chicago and Northwestern:													
1880	1,154,632	1,131,683	1,361,725	1,294,573	1,875,608	1,671,177	1,699,686	1,767,938	2,020,245	2,105,217	1,855,622	1,477,902	19,416,007
1881	1,240,664	963,204	1,178,795	1,474,612	1,879,006	2,306,440	1,983,032	2,315,164	2,292,676	2,341,098	2,019,038	1,855,477	21,849,209
1882	1 644,935	1,474,176	1,672,931	1,668,741	2,110,947	2,022,700	2,025,736	2,099,755	2,497,053	2,532,100	2,069,287	1,718,379	23,828,973
Chicago, Burlington and Quincy:													
1880	1,432,740	1,411,870	1,732,518	1,489,894	1,909,627	1,682,956	1,773,643	1,834,321	1,862,285	1,934,762	1,837,860	1,552,018	20,454,494
1881	1,307,948	1,034,821	1,418,149	1,574,371	1,679,455	2,083,803	1,888,358	2,173,945	2,262,981	2,031,001	1,816,133	1,905,490	21,324,150
1882	1,658,834	1,457,300	1,566,217	1,530,838	1,505,261	1,437,164	1,625,006	2,086,858	2,186,400	2,270,444	2,199,421	.....	.....
Chicago, Milwaukee and St. Paul:													
1880	764,298	738,749	900,675	871,041	1,134,745	1,037,958	1,026,708	991,297	1,257,677	1,493,620	1,472,037	1 397,308	13,086,119
1881	990,847	682,717	916,989	1,259,946	1,538,491	1,729,811	1,568,706	1,678,361	1,644,676	1,591,052	1,569.597	1,854 269	17,025,456
1882	1,435,000	1,377,000	1,561,000	1,518,000	1,629,000	1,620,000	1,465,000	1,545,000	1,950,000	2,251,000	2,072,000	1,964,000	20,386,999
Chicago, St. Paul, Minneapolis and Omaha:													
1880	193,827	173,078	259,783	259,208	232,146	218,093	236,995	251,013	300,833	342,052	342,894	312,173	3,122,097
1881	257,786	158,594	251,648	261,211	350,124	404,562	383,202	385,586	373,370	379,029	392,921	432,615	3,981,296
1882	307,498	315,100	405,779	356,558	406,420	363,109	331,480	394,555	482,997	546,671	517,595	375,796	4,973,052
Cincinnati, Indianapolis, St. Louis and Chicago:													
1880	155,697	172,541	198,220	168,199	186,995	200,332	204,138	233,478	343,627	239,881	209,014	198,254	2,412,185
1881	182,523	171,511	191,005	183,710	191,056	192,299	177,161	229,858	228,653	221,320	211,014	195,809	2,296,916
1882	200,042	186,879	208,066	204,269	199,110	195,948	209,564	.....	259,379	.....	219,732	189,956	2,645,530
Denver and Rio Grande:													
1880	124,759	126,922	160,883	164,882	193,925	295,455	373,132	400,133	406,583	473,318	408,562	349,196	3,478,007
1881	307,476	317,681	398,493	433,111	514,767	584,230	548,284	606,193	589,287	638,432	547,055	624,728	6,206,812
1882	491,914	412,987	535,055	559,917	614,298	537,462	495,797	574,040	595,306	630,598	512,965	626,728	6,349,857
Hannibal and St. Joseph:													
1880	176,079	166,965	216,061	206,735	191,317	179,396	224,312	238,081	233,448	242,214	207,147	279,635	2,561,366
1881	154,401	122,874	176,356	190,812	172,950	190,740	201,899	210,240	215,103	231,913	195,607	180,376	2,230,961
1882	125.601	152,691	162,475	150,481	151,999	147,526	184,609	254,569	239,732	238,563	249 252	239,891	2,303,388
Illinois Central:													
1880	595,212	613,806	613,008	535,732	665,120	681,736	724,095	732,755	806,836	880,211	783,120	673 182	8,304,812
1881	631,281	524,499	557,789	662,493	673,259	803,887	720,004	868,407	828,847	815,238	737 218	763,475	8,586,397
1882	746,744	697,274	686,228	640,014	674,749	663,746	752,251	813,600	828,238	865,325	752,144	697,051	8,831,281
Indiana, Bloomington and Western:													
1880	80,498	89,690	116,185	90,374	85,733	106,954	103,438	116,732	110,622	121,343	96,621	104,619	1,233,079
1881	90,283	83,261	192,085	203,677	200,064	199,846	190,125	272,114	247,332	225,678	200,450	192,622	2,487,569
1882	195,824	175,755	206,235	205,934	182,554	186,133	206,072	278,814	273,100	269,046	256,998	205,212	2,641,675
Louisville and Nashville:													
1880	674,455	575,035	612,593	563,883	655,014	976,229	772,538	827,089	931,911	1,000,327	953,087	949,185	9,491,346
1881	812,118	805,124	947,959	855,704	828,726	1,227,885	817,135	876,192	951,566	1,002,950	1,065,223	1,153,779	11,344,361
1882	964,527	960,315	1,068,834	953,603	958,130	1,215,490	1,063,765	1,043,912	1,114,513	1,215,932	1,192.390	1,221,215	12,981,140
Mobile and Ohio:													
1880	250,116	204,095	168,302	140,091	129,348	121,855	131,621	140,593	184,247	264,714	251,368	287,372	2,273,622
1881	224,347	216,768	230,916	163,551	145,803	136,517	135,549	160,789	210,262	256,924	262,986	258,812	2,403,224
1882	159,676	158,590	148,166	141,957	134,378	136,184	135,174	137,475	157,874	267,433	295,110	307,643	2,179,666
Nashville, Chattanooga and St. Louis:													
1880	205,634	191,154	169,457	155,466	158,839	144,130	151,594	169,326	167,473	178,266	182,087	175,966	2,049,484
1881	178,143	190,866	207,710	183,525	104,430	154,549	150,430	168 317	179,979	172,121	152,059	173,127	2,075,943
1882	156,994	159,961	161,005	154,155	135,556	119,074	160,991	168,304	168,999	180,319	181,336	261,082	3,408,169
New York and New England:													
1880	164,232	149,907	183,845	179,689	183,701	219,891	205,056	249,885	235,642	215,491	210,856	198 108	2,396,302
1881	189,749	173,614	212,019	216,913	217,185	231,518	246,821	280,524	299,573	261,206	240,764	240,063	2,809,255
1882	213,840	217,261	265,222	261,044	289,722	295,392	289,441	346,490	338,347	310,145	276,183	.....	.....
New York, Lake Erie and Western:													
1879	1,147,173	1,207,391	1,356,780	1,372,755	1,350,574	1,230,419	1,273,533	1,450,223	1,492,497	1,713,697	1,515,835	1,398,224	16,509,127
1880	1,296,381	1,252,218	1,644,958	1,643,151	1,592,544	1,661,812	1,580,976	1,606,874	1,786,417	1,899,910	1,799,338	1,726,788	19,149,361
1881	1,443,437	1,425,765	1,847,261	1,709,057	1,776,891	1,794,982	1,787,081	1,772,895	1,734,200	1,814,866	1,715,469	.....	.....
Northern Central:													
1880	334,494	330,860	415,325	386,130	329,788	419,193	450,298	453,923	464,093	512,918	459,054	494,310	5,050,387
1881	386,157	382,657	452,906	487,273	465,588	487,287	440,811	498,008	429,565	449,664	487,160	476,622	5,443,697
1882	407,368	413,551	430,194	435,129	482,607	482,752	509,683	667,488	592,435	550,225	526,685	490,003	5,800,176
Northern Pacific:													
1880	81,300	77,259	119,357	185,700	217,613	253,105	241,277	223,500	330,300	358,456	300,822	220,993	2,629,710
1881	116,508	78,803	162,984	216,210	312,705	412,024	393,260	434,085	534,363	583,555	475,610	439,724	4,044,576
1882	245,369	268,935	373,141	451,023	616,231	704,617	694,067	727,215	772,838	829,831	761,324	564,749	7,009,344
Philadelphia and Erie:													
1880	224,307	245,372	327,678	334,947	311,470	331,024	308,699	347,532	322,737	367,082	324,966	281,919	3,727,733
1881	224,303	225,501	285,573	293,323	343,792	350,585	291,669	303,849	276,522	292,392	284,078	282,772	3,454,309
1882	252,727	246,246	265,321	277,851	341,415	347,614	377,206	420,329	386,455	397,164	369,583	335,513	4,011,413
St. Louis and San Francisco:													
1880	198,091	195,948	193,146	176,164	167,664	173,607	213,297	259,995	280,873	328,194	290,329	226,063	2,698,371
1881	212,435	178,234	262,050	265,298	283,399	260,254	252,333	286,373	279,064	308,569	284,320	287,914	3,160,245
1882	256,784	244,654	274,959	242,806	253,419	240,177	318,613	381,637	336,805	360,900	331,490	339,424	3,582,811
St. Louis, Alton and Terre Haute:													
1880	153,139	163,737	168,994	155,462	147,928	150,207	191,077	216,759	204,295	221,863	188,773	184,503	2,146,741
1881	175,725	166,012	201,137	197,447	172,177	165,896	165,393	189,180	196,368	204,338	169,795	171,127	2,112,801
1882	168,987	149,619	178,145	157,450	162,842	142,742	192,017	236,137	217,659	229,962	206,040	184,526	2,245,320
St. Louis, Iron Mountain and Southern:													
1880	555,983	490,195	451,560	408,241	349,053	363,454	432,655	565,869	671,219	688,365	632,052	656,951	6,265,597
1881	570,957	560,791	704,002	548,300	479,075	474,302	533,512	644,386	708,325	719,239	687,271	709 498	7,319,744
1882	516,370	501,127	585,008	581,977	519,120	529,700	515,519	675,981	724.160	809,394	843,973	781,305	8,764,772
St. Paul, Minneapolis and Manitoba:													
1880	180,239	137,645	261,798	333,014	281,899	243,407	272,089	232,579	274,188	345,057	300,675	297,641	3,160,231
1881	254,187	159,482	320,962	425,685	382,642	405,322	387,488	414,954	485,736	605,708	508,530	528,262	4,878,960
1882	395,461	418 358	531,004	570,890	858,902	856,417	853,296	801,759	832,776	979,057	913,335	753,515	8,764,722
Texas and Pacific:													
1880	245,785	219.165	215,070	174,177	141,083	153,066	195,711	226,073	266,570	303,666	312,184	301,858	2,754,408
1881	281,176	260,781	319,928	295,066	281,782	285,405	328,063	381,331	345,790	419,203	369,521	401,058	3,921,569
1882	310,785	255,644	332,911	359,543	409,228	384,713	367,215	439,918	470,613	541,901	619,655	641,044	5,143,179
Union Pacific Railway:													
1880	1,433,636	1,393,992	1,730,509	1,937,220	2,027,269	1,928,528	1,934,215	1,913.035	2,270,179	2,707,860	2,251,148	1,869,335	23,448,445
1881	1,339,799	1,374,740	1,674,860	1,766,894	2,319,238	2,884,774	2,528,826	2,638,659	2,844,357	3,169,530	2,723,608	2,267,004	29,776,899
1882	1,961,088	1,759,863	2,226,832	2,462,004	2,491,590	2,508,453	2,301,000	2,762,107	2,949,112	3,158,337	2,821,070	2,294,000	30,088,190
Wabash, St. Louis and Pacific:													
1880	776,790	759,451	978.629	892,024	948,773	953,468	1,966,742	1,189,478	1,178,950	1,501,203	1,131,787	1,050,816	12,428,112
1881	811,617	818,922	1,121,592	1,023,482	1,144,660	1,308,993	1,131,752	1,542,838	1,490,027	1,397,781	1,343,556	1294,657	14,467,790
1882	1,220,905	1,134,768	1,315,776	1,378,194	1,204,864	1,149,682	1,418,837	1,772,544	1,682,382	1,595,680	1,525,715	1,331,952	16,738,360

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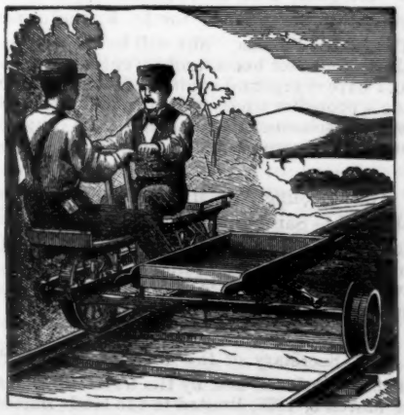

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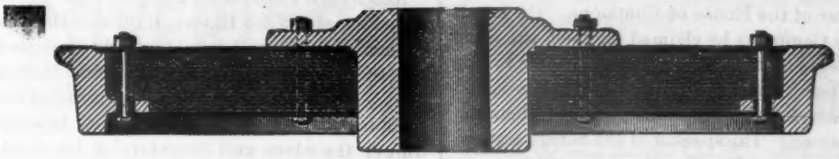

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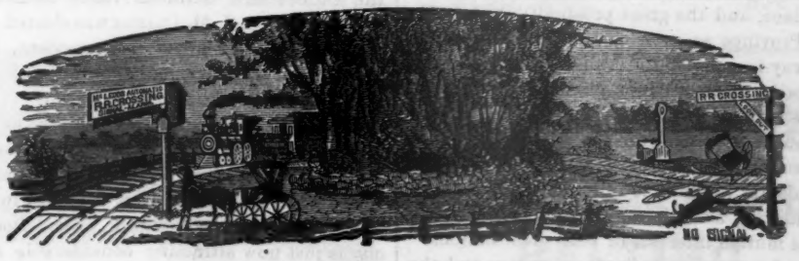

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OUR CANADIAN LETTER.

[From our Special Correspondent.]

ON Thursday last the members-elect of the Dominion Parliament took the oath of allegiance and signed the test roll. The Hon. G. Kirkpatrick, member for Frontenac, is the new speaker. On Friday the formal opening of the first session of the Fifth Parliament took place. His Excellency the Governor-General arrived at the Parliament House at three o'clock; he was accompanied by his staff and a military escort. Shortly after he reached the Senate Chamber, the members of the House appeared at the bar of the Senate, their speaker informing His Excellency that he had been elected speaker of the House of Commons. On behalf of the Commons he claimed for them the usual privileges of freedom of speech, access to His Excellency's person at all seasonable times, and the most favorable consideration for their deliberations. The speaker of the Senate assured the speaker of His Excellency's confidence in their wisdom and prudence, and promised them on behalf of His Excellency, the customary privileges. The Governor-General in his speech congratulates the Honorable gentlemen of the Senate and the gentlemen of the House of Commons, on the auspicious circumstances under which they begin their labors, on the general prosperity of Canada, etc., on his visit to British Columbia, the natural resources of the Province, and the great prosperity in store for the Province as soon as the Canadian Pacific Railway is completed. Alluding to the United States he said: "While passing through the United States I was rejoiced to observe many evidences of regard for the Empire of which this country forms so large a portion. May this friendship, which is so fully returned by us, be as enduring as it is natural and advantageous to the mutual interests of both great nations!" He spoke encouragingly of emigration and the development of Manitoba in the northwest; of a measure to be submitted relating to representation in Parliament which should be amended, and the electoral franchise in the several Provinces assimilated; that legislation by the Dominion Parliament would be necessary —to prevent the unrestrained sale of intoxicating liquors—by regulating the granting of shop, saloon and tavern lincenses; of measures to be submitted regulating factory labor, and the protection of the workingman and his family; of bills to be introduced for the consolidation and amendment of the laws relating to customs, the militia, and the public lands; also respecting the civil service, and acts relating to banking and the examination of masters and mates of vessels navigating inland (Canadian) waters; of the unprecedented progress of the Canadian Pacific Railway, and that it was confidently expected that the Rocky Mountains would be reached this year, and within the same period substantial progress made on the Lake Superior station, and the track laid on a large portion of the road now under construction in British Columbia. That traffic on the Intercolonial railway is largely in excess of former years, and the balance in favor of the road shows a gratifying increase; that the expenditure on capital account amounted to more than $7,000,000 surplus of the consolidated revenue, together with the proceeds of the sales of the lands in the northwest during last year, were more than sufficient to cover that expenditure; and that the net debt at the close of the year and the amount of interest paid thereon were less than for the year previous; that the estimates for the ensuing year have been prepared with all due economy consistent with the necessary development of the varied resources of the Dominion. On the 1st of January, 1885, the large five per cent loan will mature; a bill would be submitted authorizing the issue of debentures bearing a rate of interest not exceeding four per cent, for the redemption of this loan.

Shortly after delivering his speech the Governor-General left for Rideau Hall, and the vast concourse inside and outside slowly dispersed.

A State dinner was given at Rideau Hall on Friday evening, at which all the dignitaries and notables of the Capital were present. After the dinner the wives and daughters of his guests were received by His Excellency.

Mr. Dalton McCarthy will introduce a bill to constitute a Court of Railway Commissioners, and also a bill to further amend the Consolidated Railway Act of 1879.

The Government will shortly transfer the control of the Canadian Pacific Railway from Prince Arthur's Landing to Rat Portage.

At the annual meeting of the shareholders of the Ottawa and Gatineau Valley Railway on Wednesday last, J. M. Currier was elected president, C. H. Mackintosh vice-president, H. B. Mackintosh secretary, and I. M. Mitchell, managing director and engineer-in-chief.

Senator Howlan has gone to Detroit in order to ascertain more fully the views of some of the gentlemen who represent the National Board of Trade of the United States, in relation to reciprocal trade with Canada. Reciprocity is just now attracting considerable attention. "Le Courier de Montreal," one of the best conducted journals in Canada, in commenting upon an editorial copied from the AMERICAN RAILROAD JOURNAL on Commercial Treaties with Mexico, Canada and the Sandwich Islands, fully endorses the JOURNAL.

A Department of Indian affairs has been created with Sir John A. Macdonald as Minister, and with the title of Superintendent General.

It is said that Mr. Dean, of Dean, Westbrook & Krauss, of Philadelphia, has been awarded the contract of the traffic and railway bridge at Emerson, Manitoba, the cost of which will be about $200,000.

Great pressure is brought to bear on the Government in support of the free canal movement, and the matter will come up, it is thought, early in the session.

OTTAWA, Feb. 15, 1883. "W."

ENGINES are now in course of construction at the works of James Reese & Sons, Pittsburgh, Penn., to propel a boat where previously only the canoe of the Indian and the batteaux of the traders were seen. The new field is the Saskatchewan, in the Dominion of Canada, whose waters run into the polar regions of Hudson's Bay. Capt. John Todd, of Beaver, a navigator to whom the headwaters of the Missouri, Yellowstone, etc., are familiar, is here for the purpose of having these engines built. They will be shipped via Northern Pacific and Canada Pacific railroads to Belly River, a branch of the Saskatchewan, where the boat is to be built under Capt. T.'s direction. She will be 175 feet long, with 31 feet beam, and 3½ feet depth. The place selected is near Fort McLeod, some distance north of the Montana line and west of British Columbia.

DEPOSITIONS taken at Richmond, Va., before a notary to be used in a suit brought in Chicago by the Pullman Palace Car Company against an Illinois road for using sleepers on its line without paying a royalty, show that sleeping-cars were used on the Richmond and Fredericksburg Railroad forty years ago. Among those whose depositions have been taken in this case are Col. Thomas Dodamead, for many years superintendent of the Richmond and Danville Railroad; W. N. Bragg, formerly master carbuilder on the Richmond and Fredericksburg Railroad, and master machinist Kahn.

IT is said that the St. Gothard Tunnel is diverting the bulk of the Italian trade into the hands of the Belgians, Germans, and Hollanders with startling rapidity. Without breaking bulk early fruits are taken from all parts of Italy to Ostend, Antwerp, and Rotterdam, whence they are carried by fast steamers to London and other English ports. But, on the other hand, Germany is sending into Italy large quantities of coal, iron, machinery, copper, and other articles, of which the latter received nothing before. In two months alone the Italians imported 1,446 tons of paper.

THE Harlan & Hollingswor h Company, of Wilmington, Del., have contracted to build a steam timber dredger for D. F. Sullivan, of Pensacola, Florida. She will be 200 feet keel, thirty-four feet beam, and seventeen feet hold, and have compound engines 28x44x4 feet, turning a propeller wheel 20 feet in diameter. She will be schooner-rigged and unlike anything ever before constructed in this contry.

THE Roebling Wire Mill, of Trenton, has just shipped to San Francisco by the Pennsylvania Railroa a wire street-railway rope 1½ inches in diameter, over four miles long and weighing twenty-five tons. It is said to be the longest and heaviest rope ever made in the country.

THE Secretary of the Interior has decided that railroads are not, by the terms of the act of March 3, 1875, limited to the lands immediately adjoining the road in cutting ties and obtaining other construction material intended for the use of the railroad.

THE new Central Passenger Railway of Baltimore commenced operations on the 7th inst. Twenty cars are now running at intervals of six minutes.

EAGLE
TUBE COMPANY
NEW YORK.
614 to 626 West Twenty-fourth Street.

Boiler Tubes

Of all regular sizes, of the best material, and warranted.

Locomotive Water-Grates a specialty, and 20 per cent below regular prices.

PRICES LOWER THAN OTHER MANUFACTURERS.

NO PAYMENT REQUIRED UNTIL TUBES ARE TESTED AND SATISFACTORY.

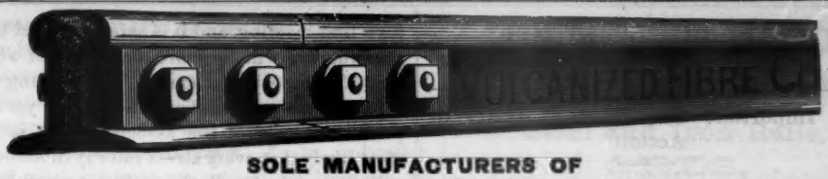
N. B.—Send for Stock List.

W. RYDER'S
PATENT
Practical Shaking Grate Bar,
OFFICE: 134 Water Street,
New York.

The W. Ryder Double-Acting Grate Bars are so constructed as to rest upon a frame with friction rollers, and by means of a lever attached to the front rocking bar, a reverse or reciprocal motion is produced in each bar which effectually breaks up the clinkers, and removes all the ashes from the bottom of the furnace.

By this means we get the largest percentage of circulation of air, which keeps the bars cool and prevents them from burning or warping. There is also fully ten per cent of fuel saved, as it does away with the necessity of opening the furnace door and shaking the fire, and thus preventing large volumes of cold air rushing in and producing sudden expansions and contractions, frequently blistering the bottom of the boiler.

This bar has two very superior qualities which no shaking grate ever possessed. The first is a large friction roller at each end of the bar, thus enabling it to be moved back and forth with the greatest ease, though the bar be ever so large and heavy. The second is the header at the end of every bar, thus absolutely protecting the bar from all obstructions of coal and clinkers, that otherwise might get at the end of the bar and stop its working. This header also affords plenty of expansion and contraction room for the bars. The first set of these bars ever made has been in constant use for some four and one-half years, without any expense except first cost, and the party using them prefers them to any other bar in use.



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IMPROVED VULCANIZED FIBRE TRACK-BOLT WASHERS,

which form non-metalic, permanently elastic compensating cushions, absorbing shocks and vibrations, and absolutely locking the nuts. These Washers have been adopted by a large number of railroads as the cheapest and best device in use. Flexible vulcanized-fibre dust guards and oil box packings, which are absolutely unaffected by oil and grease, are far more durable than leather and much cheaper.

Office and Factory, Wilmington. Del.

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Cost of packing Boxes with Hulls and Oil for nine months, $1.60; cost of packing Boxes with Cotton-waste and Oil for nine months, $4.08.

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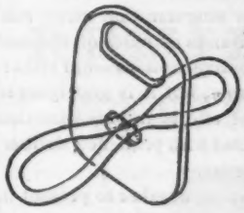
Catalogues free on application.

THE JENKINS STANDARD PACKING is acknowledged by users as the *Best* in the world. Unlike all other Packings, the **Jenkins Standard Packing** can be made any thickness desired in a joint by placing two or as many thicknesses together as desired, and following up joint it vulcanizes in place and becomes a metal of itself (it is frequently called Jenkins Metal), and will last for years, as it does not rot or burn out. Avoid all imitations, as a good article is always subject to cheap imitations. The **genuine** has stamped on every sheet, "**Jenkins Standard Packing,**" and is for sale by the Trade generally. Manufactured only by

JENKINS BROS.,
PROPRIETORS JENKINS PATENT VALVES, PACKING, &c.
71 JOHN ST., NEW YORK.
104 Sudbury St., Boston.

SWEETLAND SAFETY LINK GUIDE.
Patented August 29, 1882.



The guide is manipulated by means of the handle at the upper part, extending far enough above the draw-head to prevent danger of the hand being crushed while coupling cars, and can be used in any place where an ordinary link is used.

The guide plate is made of one-quarter inch iron, ten inch by twelve inch—including the handle—and weighs less than six ponnds.

For further particulars address,
FRANK SWEETLAND,
Edwardsburg, Mich.

RAILROAD IRON.

The undersigned, agents for the manufacturers, are prepared to contract to deliver best quality American or Welsh Steel or Iron Rails, and of any required weight and pattern. Also Speigel and Ferro Manganese

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GASKETS, Etc.

RUBBER CLOTHING, LACE LEATHER, BELT HOOKS,

RAILROAD, MINING, AND MILL SUPPLIES.

No. 21 Park Place,
NEW YORK.

STREET CAR DEPARTMENT.

An Important Step Toward Unity of Action.

THE formal organization on the 12th of December last, of the American Street Railway Association, was the first step taken toward the union of interests on the part of street roads. The importance of this branch of passenger transportation can hardly be over estimated. The street railways are almost as essential to a city's prosperity as the streets themselves. They are the arteries of locomotion, and scarcely a person however humble fails to avail himself of the facilities for cheap and rapid travel thus afforded hundreds of times in the course of a year. It seems singular that street railways with their thousands of miles of finished road and millions of active capital should hitherto lack organized unity, but it is gratifying to learn that their first efforts in this direction have been characterized with prudence, deliberation and common sense.

We hope in an ensuing number to present in detail the aims and objects of this association through a communication from one of its active officers, and we will not anticipate that gentleman, nor take the liberty of stating at length the purposes of an organization which is yet in embryo; but an examination of the verbatim report of the December meeting held in Boston reveals one or two striking facts of a most satisfactory nature. The adoption of a Constitution and By-Laws was not accomplished without considerable debate, and thus the association at the outset is given a well digested plan of action, not a series of ill-considered regulations, impractible and liable to constant change. The annual dues are fixed at a very moderate sum, and no distinction is made between small companies and those of greater wealth and importance. Every company pays the same fees and dues, and each is entitled to one vote. Over this fundamental principle much argument was held. It was urged by some that a *pro rata* system of assessment would be a most equitable arrangement, each company being assessed according to the number of cars in actual use on its road. Various resolutions were offered to accomplish this end, but eventually it was decided to admit all roads upon an equal basis of representation. We cannot help thinking this step a wise one, more clearly in accord with the general objects of the association as stated in article II of its constitution. The organization is thus confined to working for the general benefit of all street railways, and prevented from entering into litigation on behalf of a few roads whose financial resources may be great. In the words of a prominent gentleman present at the meeting, it was not the object of the association to enter into law-suits or defend patents, and in no way was it a protective organization. Certain it is that the association will meet with greater public favor and approval without this protective feature, which to some might seem to possess a flavor of monopoly. There are over four hundred street railways in America, and fifty-six were represented at the convention. This was an excellent showing for a first meeting, and it is safe to predict that the number will be more than doubled when next the association meets. Considering the small expense incurred and the simple yet important objects of the association, it seems most likely that every street railway in America will ultimately enroll themselves as members.

The second regular meeting of the association will be held in Chicago, Ill., on the 9th of October next, and on this occasion it is our intention to have a representative of the JOURNAL present, to report in detail the actions of the delegates. We fully recognize the claims of street railways as institutions of public usefulness and benefit, and we shall every week devote a portion of our space to their interests.

Constitution, By-Laws and Officers of the A. S. R. A.

WE append the Constitution and By-Laws of the American Street Railway Association, and shall mail copies of this number to the officers of every street railway company whose *locus* we can obtain. Full reports of the recent meeting can be obtained upon application to the Secretary and Treasurer. We would call particular attention to Article II of the Constitution, which defines the object of the organization:

CONSTITUTION.

NAME.

I. The name of the Association shall be THE AMERICAN STREET-RAILWAY ASSOCIATION, and its office shall be at the place where the Secretary resides.

OBJECT.

II. The object of this Association shall be the acquisition of experimental, statistical and scientific knowledge relating to the construction, equipment and operation of street railways, and the diffusion of this knowledge among the members of this Association, with the view of increasing the accommodation of passengers, improving the service and reducing its cost; the establishment and maintenance of a spirit of fraternity among the members of the Association by social intercourse, and the encouragement of cordial and friendly relations between the roads and the public.

MEMBERS.

III. The members of this Association shall consist of American Street-Railway Companies, or lessees, or individual owners of street railways, and each member shall be entitled to one vote by a delegation presenting proper credentials.

AMENDMENT.

IV. This Constitution may be amended by a two-thirds vote of the members present at a regular meeting, after the proposed amendment shall have been submitted, in writing, at the preceding regular meeting and a copy sent to each of the members.

BY-LAWS.

APPLICANTS.

ARTICLE I. Every applicant for membership shall signify the same, in writing, to the Secretary, inclosing the requisite fee, and shall sign the Constitution and By-Laws.

OFFICERS.

II. The officers shall consist of a President, three Vice-Presidents, and five others, who shall constitute the Executive Committee, and a Secretary and a Treasurer. The Executive Committee shall have the entire charge and management of the affairs of the Association. The Officers and Executive Committee shall be elected by ballot, at each regular meeting of the Association, and shall hold office until their successors shall be elected. The duties of Secretary and Treasurer shall be performed by the same person. The Secretary and Treasurer shall not be a member of the Executive Committee.

DUTIES OF OFFICERS.

III. The officers of the Association shall assume their duties immediately after the close of the meeting at which they are elected; they shall hold meetings at the call of the President, or in his absence, at the call of the Vice-Presidents, in their order, and make arrangements for carrying out the objects of the Association.

PRESIDENT.

IV. The President, if present, or, in his absence, one of the Vice-Presidents, in their order, if present, shall preside at all meetings of the Association and of the Executive Committee.

TREASURER.

V. The duties of the Treasurer shall be to receive and safely keep all moneys of the Association; to keep correct accounts of the same, and pay all bills approved by the President; and he shall make annual report to be submitted to the Association. He shall give a bond to the President in such sum and with such sureties as shall be approved by the Executive Committee.

SECRETARY.

VI. The duties of the Secretary shall be to take minutes of all proceedings of the Association and of the Executive Committee, and enter them in proper books for the purpose. He shall conduct the correspondence of the Association, read minutes and notices of all the meetings, and also papers and communications, if the authors wish it, and perform whatever duties may be required in the Constitution and By-Laws appertaining to his department. He shall be paid a salary, to be fixed by the Executive Committee.

MEETINGS.

VII. The regular meeting of the Association shall be held on the second Tuesday in October in each year, at such hour and place as shall be designated at the preceding meeting. Special meetings may be held upon the order of the Executive Committee. Notice of every meeting shall be give by the Secretary, in a circular addressed to each member at least thirty days before the time of meeting. Fifteen members shall constitute a quorum of any meeting.

ORDER OF BUSINESS.

VIII. At the regular meeting of the Association the order of business shall be:

1. The reading of the minutes of the last meeting.
2. The address of the President.
3. The report of the Executive Committee on the management of the Association during the previous year.
4. The report of the Treasurer.
5. Reports of Special Committees.
6. The election of Officers.
7. The reading and discussion of papers of which notice has been given to the Secretary at least thirty days prior to the meeting.
8. General business.

IX. At other general meetings of the Association, the order of business shall be the same, except as to the 3d, 4th and 6th clauses.

NOTICES.

X. The Secretary shall send notices to all members of the Association, at least thirty days before each meeting, mentioning the papers to be read and any special business to be brought before the meeting.

EXECUTIVE COMMITTEE.

XI. The Executive Committee shall meet one hour before each meeting of the Association; and, on other occasions when the President shall deem it necessary, upon such reasonable notice, specifying the business to be attended to, as the Committee shall, by vote, determine.

VOTING.

XII. All votes, except as herein otherwise provided, shall be *viva voce;* and, in case of a tie, the presiding officer may vote.

NON-MEMBERS.

XIII. Any member, with the concurrence of the presiding officer, may admit a friend to each meeting of the Association; but such person shall not take any part in the discussion, unless permitted by the meeting.

READING OF PAPERS.

XIV. All papers read at the meetings of the Association must relate to matters connected with the objects of the Association, and must be approved by the Executive Committee before being read, unless notice of the same shall have been previously given to the Secretary, as hereinbefore provided.

PAPERS, DRAWINGS AND MODELS.

XV. All papers, drawings or models submitted to the meeting of the Association shall remain the property of the owners; subject, however, to be retained by the Executive Committee for examination and use, but at the owner's risk.

FEES.

XVI. Members shall pay an initiation fee of twenty-five dollars, and annual dues of fifteen dollars, payable in advance. The Executive Committee shall have no power to expend, for any purpose whatever, an amount exceeding that received, as hereinbefore provided for. It shall be the duty of members to make such returns to the Secretary as shall be required by the Executive Committee.

ARREARS.

XVII. No member whose annual payment shall be in arrears shall be entitled to vote.

WITHDRAWAL.

XVIII. Any member may retire from membership, by giving written notice to that effect to the Secretary, and the payment of all annual dues to that date; but shall remain a member, and liable to the payment of annual dues, till such payments are made, except as hereinafter provided.

EXPULSION.

XIX. A member may be expelled from the Association, by ballot of two-thirds of the members voting, at any regular meeting of the Association, upon the written recommendation of the Executive Committee.

RULES OF ORDER.

XX. All rules not provided for in these By-Laws shall be those found in Cushing's Manual.

AMENDMENT.

XXI. All propositions for adding to or altering any of these By-Laws shall be laid before the Executive Committee, which shall bring them before the next regular meeting of the Association, if it shall think fit, and it shall be the duty of the Committee to do so, on the request, in writing, of any five members of the Association.

CONSTITUTION AND BY-LAWS.

XXII. Each member of the Association shall be furnished by the Secretary with a copy of the Constitution and By-Laws of the Association, and also a list of the names and residences of the members.

The officers of the association for the current year are as follows:

PRESIDENT: H. H. LITTELL,
General Manager, Louisville City Railway Company, Louisville, Ky.

FIRST VICE-PRESIDENT: WILLIAM H. HAZZARD,
President, Brooklyn City Railroad Company, Brooklyn, N. Y.

SECOND VICE-PRESIDENT: CALVIN A. RICHARDS,
President, Metropolitan Railroad Company, Boston, Mass.

THIRD VICE-PRESIDENT: GEORGE B. KERPER,
President, Mt. Adams and Eden Park Inclined Railway Company, Cincinnati, O.

SECRETARY AND TREASURER: WILLIAM J. RICHARDSON,
Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE.

PRESIDENT, VICE-PRESIDENTS and

JULIUS S. WALSH, Pres. Citizen's Railway Co., St. Louis, Mo.

CHARLES CLEMINSHAW, Vice-Pres. Troy and Lansingburgh Railroad Co., Troy, N. Y.

THOMAS LOWRY, Pres. Minneapolis Street Railway Co., Minneapolis, Minn.

JAMES K. LAKE, Supt., Chicago West Division Railway, Chicago, Ill.

D. F. LONGSTREET, Gen'l Manager, Union Railroad Co., Providence, R. I.

STREET RAILWAY NOTES.

THE AMERICAN RAILROAD JOURNAL is the oldest railroad publication in the world—the first periodical ever published in the interests of railroads, and it made its appearance when the giant power of steam locomotion was in its infancy. Fifty-two years after, it is the first publication to espouse the interests of street railways, and provide them with an exponent of their views, necessities and difficulties.

IN conducting the street railway department of the AMERICAN RAILROAD JOURNAL, we are naturally solicitous of obtaining free and full opinions on the live questions which are of interest to those connected with surface roads. Communications of this nature will be gladly welcomed, and we shall endeavor to conduct the department with vigor. As an indication of what subjects are of leading interest, we enumerate the titles of several committees appointed at the recent meeting of the Street Railway Association:

Track-Construction.
Propelling Power.
Buildings.
Labor and Wages.
Collection of Fares.
Removing Snow and Ice.
Horse-shoeing.
Heating and Lighting.

Papers will be prepared on these subjects and read at the October meeting.

WE would like to receive some definite information as to the present *status* of elevated roads relative to street railways. The Constitution of the association of the latter does not touch upon this point, which is consequently left in doubt. It is true that there is at present but one city in the western continent which boasts of elevated roads, but this number may increase, and it would be well at the start to have them relegated to their proper sphere. In fact we offer a suggestion to the Street Railway Association that they define clearly their construction of the meaning of *street railway*, and not leave it open for general interpretation. If the use of steam as a motive power is to debar all roads employing it from joining the association, it must be borne in mind that many surface roads employ dummy engines in their ordinary passenger travel, while the simple use of an elevated road-bed is by no means confined to the New York elevated roads. It is customary to seek interpretation of the laws from the word of lawyers, and emulating this example we would like to receive the definition of "street railway" from the railways themselves promising to confine ourselves to the limitations thus proscribed.

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Manufacturers of Fine
RAILWAY VARNISHES,
COACH AND CAR COLORS,
Ground in Oil and Japan,
ETC., ETC.

Fine Brushes adapted for Railroad use. All kinds of Artists' Materials. Colors for ready use, and all specialties for Railroad and Carriage purposes.

Railroad companies will save themselves great trouble in painting by allowing F. W. DEVOE & Co. to prepare their Passenger and Freight Car Colors. This will insure Durability, Uniformity and Economy. F. W. DEVOE & Co. manufacture from the crude materials, which are the component parts of any shade, and they understand better their chemical relationship, when in combination, than can be possible to those who simply buy their dry materials and then grind them.

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Operated at *sight*, and writes FASTER and BETTER than the most expert PENMAN.

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METAL
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—IMPORTERS OF—
Tin Plates, Russia Sheet Iron,
Pig Tin, Swedish Iron
and English Steel.
Blacksmiths', Machinists' and Tinmen's Supplies.
110 NORTH STREET,
BOSTON.

Shay's Improved Locomotive.

Shay's Improved Locomotive is the invention of E. Shay, of Haring, Mich., who manufactures it at the Lima Machine Works, at Lima, Ohio, and at the Michigan Iron Works, Cadillac, Mich. It was first designed to work on wood rail, short curves and steep grades, the inventor being at the time engaged in manufacturing pine lumber. He had first built a locomotive of the usual form, and not meeting with the success desired in operation, began a series of experiments extending for years, and at considerable expense, to perfect a locomotive to meet the requirements of lumbermen, where tracks must be laid to where the timber is, not admitting the selection of suitable grades, curves, etc., which usually is admissable in roads of ordinary construction. His locomotive is found to be adapted to these requirements, and consists in placing the driving-wheels in trucks frames which are free to swivel and vibrate independently of the locomotive frame, and thereby adjust themselves to curves and irregularities of track with the least possible friction. The locomoitve frame, including water and fuel, rests on the trucks, and the entire weight is useful for traction.

The mechanism used is not new, simply a new combination of machinery in common use, and consists of a boiler and engine differing only in their location from those in general use—they being rigidly attached to each other and to the locomotive frame. The trucks, the wheels of which are the drivers, are located at the ends of the locomotive frame and attached to it by swivel boxes in substantially the same manner as the trucks of ordinary cars are attached to the body. The power is conveyed from engine to drivers by means of universal joints and expansion couplings forming a flexible shaft, which is rigid in revolution, but flexible in every other direction, and in practice is found to be trustworthy and efficient. The plan of construction admits of using a light rail successfully, the weight of locomotive being distributed on eight drivers, or more if desired; and placing drivers in form of trucks allows short curves to be used with much less friction than if the drivers were rigid on the frame. For use on standard-gauge roads the plan provides for a locomotive of immense power to work around short curves, up steep grades, etc. The boiler and engine can be of any size and power desirable, the drivers and driving axles not being in the way in construction, and their number allowing of large traction power without injury to rail or drivers.

Mr. Shay has invented recently a new joint to use on his locomotive, which will not be offered for sale. There are practically but three pieces to it, and not a bolt, nut, screw or key to get loose. It has been found to be of abundant strength to stand the direct thrust of engines for locomotive work. A joint 5½ in. in diameter has ten square inches of iron to resist breaking, and a wearing surface of seven inches on each side. All the parts work from a common center.

The Lima Machine Works, of Lima, Ohio, are building engines to draw loads up grades six and one-half feet per hundred, and empty trains up eight and one-half feet per hundred. Use boilers specially designed for such service.

A new size of anthracite, known as "corn," is being put on the market at some of the collieries.

SHAY'S IMPROVED LOCOMOTIVE.

Mr. George P. Geer of Springfield, Mass., has recently published the results of his efforts to reduce the labor of book-keeping, and his work is a valuable contribution to mercantile literature. His system has been in use by him for years, and is a surprising improvement over those ordinarily used in business practice. The various chapters of the book are devoted to the treatment of special subjects, many of which are entirely new in a work of the kind. We may instance, as specimen chapters, his description of the methods of keeping the capital stock account, the balance account, the mining, factory, labor, farm accounts, etc., the keeping of books for partnerships and corporations, the declaring of dividends, the auditing of accounts, the chapter on negotiable paper, and that on the keeping of accounts by executors, administrators, trustees and assignees. Many of these subjects receive treatment for the first time, and have never before been put in print. The chief aim of the book is in the direction of labor-saving, and accountants will find it a most useful aid and instructor. Mr. Geer's work is sold for $3.00 and will be sent by mail upon receipt of price by the publishers, Clark W. Bryan & Co., of Holyoke, Mass.

In the case of Collins vs. the Sioux City and Pacific Railroad Company, the Secretary of the Interior holds that a failure on the part of the company to carry out a proviso in its land grant that such land as was not sold within three years after the completion of the road should be opened to preemption, the price realized to be returned to the company, does not derogate from the grant, nor can it operate to defeat the same or cause the lands to revert to the United States. In this case the company sold the lands, and although not within the three years' limit, it is held that this sale must be regarded as a disposal of the lands such as the statute contemplated. The Secretary says that, even if it were intended that the land should be disposed of as public lands, the purpose of the act is defeated through its failure to provide the adequate machinery for the use of the Executive Department.

Mr. R. Smith, of the Russell House, Emerson, has adorned his bar with a memento of his railroading days. It consists of a cast-iron colored boy about three feet in height, and very artistically painted. For fifteen years the little darkey rode on the cowcatcher of Mr. Smith's engine on the G. T. R. and the C. P. R. The owner of this slave had good luck with it and never ran over an animal in all those years while it held the flag in front of the iron horse.

The monthly report of the National Cotton Exchange, as made by secretary C. H. Parker, showing the cotton movement of the United States from September to the close of January, gives the overland movement direct from the producers as 721,322 bales, against 659,864 last year; to mills direct, 390,243, against 355,447. The January shipments to mills were 79,390 bales, against 26,399 last year and 76,887 the year before.

The Tuscarawas Valley and Wheeling Railway, which was sold at Cleveland, Ohio, on the 5th inst., by order of Court, was purchased by O. B. Perkins, trustee, for $3,252,500, who paid the amount in bonds of the road.

The proportions of the human figure are seven times the length of the foot. This is identically the proportion between the length and breadth of an Esterbrook Commercial pen.

What a man knows should find its expression in what he does. The value of superior knowledge is chiefly in that it leads to a performing manhood.—*Bovee.*

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The City Bank, Limited, Threadneedle Street, London, and Branches.

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This Company is prepared to act as Agent in England for Municipalities, Railway Companies, and other public bodies—to negotiate Loans and Railroad Bonds and conduct a general financial and exchange business.

J. F. BENNETT, Secretary.

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[Mention this paper.]

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1. The American Railroad Journal gives great prominence to descriptions of such new inventions as relate to its proper class of subjects.

2. Its columns contain at least a notice of every patent granted in the United States upon railroad and kindred inventions. In many cases more than this is desirable, and

3. Its editors invite communications from inventors regarding their inventions.

4. Such communications are treated with a view to their publication, and appear within these columns in all cases when this is desirable.

5. This is the oldest railroad journal in the world, and therefore

6. Inventors cannot do themselves better service in order to advance their interests, than to act upon the foregoing information.

List of Patents for Inventions Relating to Railways, Manufacturing, Mining, Street Cars, Machinery, Etc.

BEARING DATE OF FEBRUARY 6, 1883.

271,585. Draw-Bar for Cars: Charles Alkin, Chicago, Ill.
271,609. Car-Coupling: Levi Davis, Jr., Alton, Ill.
271,611. Device for Raising and Lining Railroad Tracks: William R. Dickerson, North Bend, Nebr.
271,655. Car-Coupling: John J. Pursley, Wetmore, Kan.
271,661. Car Starter: Alfred W. Smith, Boston, Mass.
271,674. Car-Coupling: William L. Albright, Cincinnati, Ohio.
271,677. Grain Car Door: William J. Arndt, Detroit, Mich.
271,680. Car-Wheel Boring and Truing Machine: William P. Barclay, Chicago, Ill.
271,685. Car Coupling: William Crandell, Westfield, N.Y.
271,695. Stock-Car: Job C. Foster, St. John, Cal.
271,721. Electric Brake-Setting Apparatus: Jesse B. Low, Pulaski, N. Y.
271,727. Construction of Railways: Daniel J. Miller, Chicago, Ill.
271,729. Oscillating Valve: Matthew R. Moore, Indianapolis, Ind.
271,741. Steam-Engine: F. J. Roth, Cincinnati, Ohio.
271,761. Cut-Off: Charles P. Allen, Denver, Colo.
271,773. Car-Brake: Benjamin Bennett, Hyde Park, Pa.
271,781. Steam-Engine: Benjamin Brazelle, St. Louis, Mo.
271,794. Automatic High and Low Water Indicator for Steam-Boilers: Bernard Collins, Kennerdell, Pa.
271,821. Apparatus for Purifying Water for Boilers: Charles Elliott, San Francisco, Cal.
271,823. Device for Manufacturing Car-Wheel Tires: James A. Facer and Adolph Schaub, Philadelphia, Pa.
271,850. Car-Coupling: Llewellyn A. Houghtaling, Elmira, N. Y.
271,867. Berth-Lock for Sleeping-Cars: John Kirby, Jr., Ludlow, Ky.
271,876. Signal and Alarm for Railroad Crossings: Herman H. Liemke, St. Louis, Mo.
271,882. Electro-Magnetic Car-Signal: John W. Marley, Chicago, Ill.
271,885. Method of and Apparatus for Heating Cars: Joshua Mason, Paterson, N. J.
271,887. Handle for Steam-Valves: Francis I. Maule, Philadelphia, Pa.
271,896. Car-Coupling: Sylvester H. Milligan, near McCluney, Ohio.
271,910. Spark-Arrester: Thomas Patterson, Stratford, Ontario, Canada.
271,941. Chuck: James Sleeth and Francis M. Lucas, Morristown, Ind.
271,951. Car-Coupling: John G. Trenear, Huntington, W. Va.
271,955. Nut-Lock: John J. Waddill, Montgomery, Ala.
271,957. Grain-Door: Robert J. Walker, Girard, Ill.
271,958. Railroad Train Telegraph: William T. Waters, Atlanta, Ga.
271,976. Fare Register and Recorder: John W. Fowler, and Daniel F. Lewis, Brooklyn, N. Y.
271,985. Station-Indicator: Geo. P. Rasck, Des Moines, Iowa.
271,989. Smoke-Burning Furnace: John Ritchie, Chicago, Ill.
271,990. Car-Coupling: John J. Roberts, Shongelo, Miss.
271,999. Automatic Switch-Stand: Oliver J. True, Port Clinton, and Henry H. Houghton, Elyria, Ohio.
272,009. Car-Coupling: J. Thompson Wright, New Albany, Ind.
272,012. Motor for use near Railways: Robt. Zinsmaier and Merritt Burt, Galion, Ohio.

[*Written for the American Railroad Journal*].

Conversion of Wave and Tide Motions into Power, and its Transmission to a Distance.

BY W. L. SILVEY.

The rapid disappearance of vast forests, and the fact that numerous coal mines are already exhausted, tend to rouse us to a sense of the danger for the future, and the inquiry naturally arises—should the exhaustion be carried much farther where will we get power to animate the sinews of our prime motor? Does nature afford a cheap, safe and reliable substitute for the expensive steam engine? The most plausible plan which has suggested itself to the author is to utilize the force of ocean tides and waves. Now as to waves there seems one grave objection to their use on account of their very irregular actions, at one time being quick and boisterous, at others slow and gentle, while ever and anon they sink to the placid ripple. These irregular actions make waves unreliable, for they may die away at the very time when greatest power is needed, leaving our sinewed giants of steel a motionless, inanimate mass. Instead of being thus irregular tides can be at all times relied on, they being very regular in their motions as well as powerful in their actions, their most serious obstacle being the best plan for storing or utilizing this incalculable mass of semi-latent energy. Enough power rolls upon our coasts unused to drive every motor in the land.

At New York the tide rises 4½ feet, at Boston 10 feet, at the head of the bay of Fundy 70 feet, at Charleston 5 feet, at London docks 17 feet, at St. Malo 26, and in the Chesapeake bay 15 feet, which very readily suggests the enormous power that every day goes unused. Let New York, Boston, Charleston or London store up and utilize this force, they have enough power to drive all their factories, etc., without the necessity of moving a single steam engine. Take Boston as an example: the amount of power that might be stored on one acre with a height of 10 feet reaches the enormous figure of 27,225,000 pounds every twelve hours, or 54,450,000 pounds every day, of which at least 50 per cent could be transmitted to the distance of 25 miles. Utilize this enormous pressure per acre, we have ample force at hand to drive every industry along our coasts. The whole coast from Newfoundland to the Carolinas is indented by numerous land-locked inlets or bays of a few hundred or a few thousand acres, as the case may be, into which the tidal wave runs, and were it then confined, and released gradually, enough power might be created and transmitted to drive our numerous factories, in fact do all the work now performed by both gas and steam. The most plausible plan yet suggested to my mind for the accomplishment of this end is to build locks across the mouth of the bay or inlet so arranged as to be opened by the inrolling tide or by attendants, and when the wave is highest the gates to be closed so as to confine the water in the basin. After this task has been accomplished little remains to be done, it being sufficient to let the water escape to the open sea through a canal in which water wheels are located. The water wheels or turbines may be used to drive huge dynamo machines, the electricity from which may be stored in accumulators for future use or conveyed over a wire direct to electro motors situated miles away, there to be used for driving huge machinery. In this way electric energy may be created and transmitted at a cost below that of steam power, and in a far more convenient form, since the cost of the plant would be much cheaper, the first cost being the principal item; and there being no consumption of fuel the wear and tear of machinery is the only expenditure that need be taken into account, while even this will be small if everything has been substantially constructed. It is useless to carry explanations farther; sufficient has been said to show the plausibility of the plan as well as to justify the most sanguine expectations of our electricians, who hold that the near future will see our electric motors taking the place of the more expensive and dangerous steam motors.

Castleton, Ind., Feb. 13, 1883.

Preservation of Railroad Ties.

Some interesting data are published showing the relative value of different methods of injecting railroad ties. On the route from Hanover and Cologne to Minden, for example, the pine ties injected with chloride of zinc required a renewal of 21 per cent after a lapse of twenty-one years; beach ties injected with creosote required a renewal of 46 per cent after twenty-two years' wear; oak ties injected with chloride of zinc required renewal to the extent of about 21 per cent after seventeen years; while the same kind of ties not injected necessitated fully 40 per cent of renewals. The conditions in all these cases were very favorable for reliable tests, and the road bed was good, permitting of easy desiccation; the unrenewed ties showed, on cutting, that they were in condition of perfect health. On another road, where the oak ties were not injected, as large a proportion as 74.48 per cent had to be renewed after 12 years; the same description of ties injected with chloride of zinc required only 3.29 per cent renewals after seven years, while similar ties injected with creosote involved, after six years, but 0.09 per cent.

Justice Duffy has decided "that ladies ought to carry their pocketbooks in their inside pockets and not in their hands, as it tends to tempt scoundrels to crime," and that "if they don't have inside pockets, they ought to have them."

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SAWS AND FILES.

THE UNRIVALLED PRODUCTION OF THE E. M. BOYNTON SAW AND FILE COMPANY—THE RECENT RE-ORGANIZATION.

For a good many years past few manufacturers have been so well or favorably known in their respective lines of business as Mr. E. M. Boynton, the saw manufacturer, in his. The saws and files, etc, made by him are regarded by experts as superior to anything else of the kind made in any part of the world, and the demand for them has been rapidly growing. On January 1 a re-organization of the concern occurred, a joint stock company being formed under the style of the E. M. Boynton Saw and File Company, with the following officers: E. M. Boynton president, C. W. Boynton vice-president, D. Farrington secretary, and T. B. Cummings, treasurer. The office and warehouse remain at the old address at 80 Beekman street, and the factory, an engraving of which is annexed, is in Brooklyn. This factory is probably the most complete establishment of its kind in the country. It can turn out more than one thousand saws per day. The company control fifteen of the most valuable patents ever taken out upon saws. One of the great specialties is the patent "Lightning" saw, patented in 1876. It has what are called "M" teeth. The patent M teeth being double, with one dress and set, cut only with outside edges, one blade follows while the other is cutting, and vice versa. As the saw is drawn back and forth, meeting the fibre direct at an opposite angle from the old V tooth, the fibre is cut off by a forward and upward motion; the cutting is mechanical, inevitable, steady and uniform. In practical use the following advantages are observed: 1st. Simplicity in sharpening. No shortening required—all teeth double M cutting clearer. 2d. A cutting edge. The file is only used to dress teeth, edge being given with whetstone—saving of friction, as well as files, steel, strength and time. 3d. Double teeth—are stiffer, less vibration. 4th. Consequently, may be and are gummed longer, saving expense and frequent repairs. 5th. Are stronger than any other. 6th. Direct cutting (upwards) avoids grit, divides resistance, relieves the pressure and wear on point of teeth—avoiding the grinding, weighing and clogging of old style saws. 7th. No waste of power, as in the old scratching system, the cutting being direct, uniform, economical and continuous. 8th. In direct cutting, edge holds longer than if dragged over the timber. 9th. It is the front cut of the hand saw cutting both ways. 10th. This saw cuts with less friction, much easier and faster than any heretofore known, while more simple than any other patent saw. The "Lightning" combines the two principles in one tooth. One point of M follows while the other is cutting, which regulates the feed, and enables the teeth of the plow or vertical form to be used for both cross cutting and slitting. This patent tooth is as simple as any hand-saw tooth to sharpen. Boynton's saws were effectually tested before Judges at the Philadelphia Fair, July 6 and 7. An ash log, eleven inches in diameter, was sawed off, with a four foot "Lightning" cross-cut, by two men, in precisely six seconds, as timed by the Chairman of the Centennial Judges of Class 15. The speed is unprecedented, and would cut a cord of wood in four minutes. The representatives of Russia, Austria, France, Italy, Spain, Belgium, Sweden, England and several other countries were present, and expressed their high appreciation. Many of the leading saw manufacurers of the world were present, but not one accepted Mr. Boynton's $1,000 challenge. The M principle is applied to saws of various kinds and for all sorts of purposes. In consequence of the practical value of the patents taken out by Mr. Boynton the earnings of the factory have multiplied five-fold in five years, and there is no doubt that an even more rapid growth will be recorded in the future.—*New York Scientific Times and Mercantile Register, Feb. 3, 1883.*

This Company also manufactures the **Noon-Day Stove Polish,** so rapidly coming into favor.

500,000
SOLD IN 1880.

Not one in a thousand failed to give satisfaction.

The First Award of Australia has been added to the Centennial Awards.

The 12-inch log at bottom of this picture was sawed off by two men by hand in 7 seconds before Commissioners of every country and the Emperor of Brazil.

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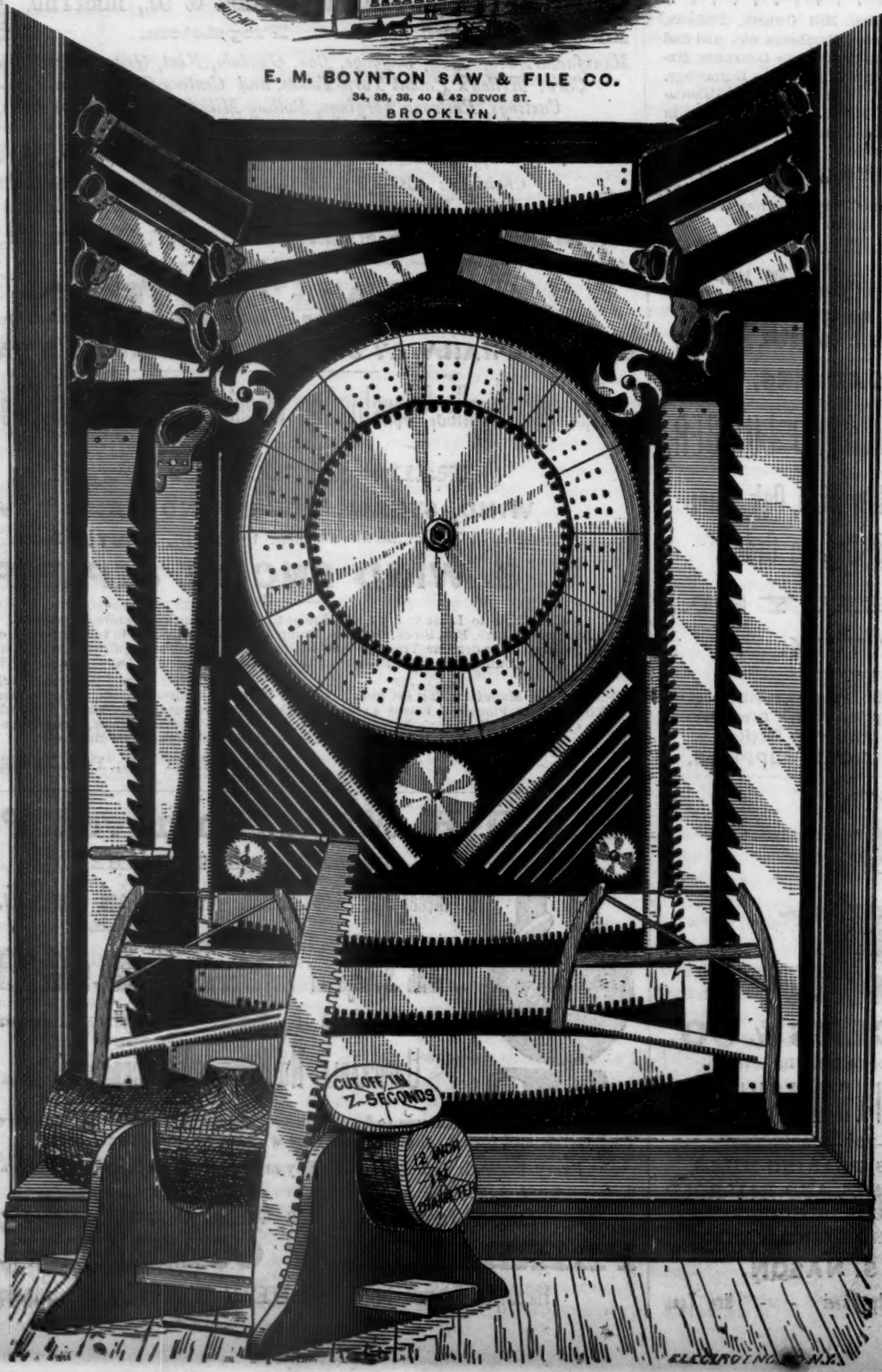
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